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ABSTRACT

The purpose of this follow-up study was to determine whether elementary school students who completed full-day/ everyday kindergarten in 1979 and 1980 exhibited any long term benefits. Data were collected from standardized tests, report cards, questionnaires, and interviews. Participants were third- and fourth-grade students (enrolled in the school at which they had attended kindergarten), their parents, and their teachers. It was expected that kindergarten students in the full-day/everyday program, parents, and teachers would have positive attitudes about full-day kindergarten. Furthermore, it was suggested that, when compared with students who attended half-day kindergarten in 1978-79 and 1979-80, children who attended the full-day kindergarten would display higher self-concept, have more positive attitudes toward school, achieve higher academic grades, receive higher conduct marks on report cards, have a lower rate of grade retention, achieve higher handwriting ratings, and have higher reading and academic scores. Results indicated that children who attend full-day kindergarten, their parents, and their primary teachers do have positive attitudes about the full-day program. These children, in contrast with children who attend half-day programs, tend to have higher academic and conduct report card marks, a lower rate of grade retention, lower handwriting ratings, and higher standardized test achievement scores. Their self-concepts and attitudes about school are not found to be negatively affected by participation in the full-day program. Questionnaires are appended. (RH)

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A LONGITUDINAL STUDY of the EFFECTIVENESS of FULL-DAY KINDERGARTEN

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A LONGITUDINAL STUDY

of the EFFECTIVENESS

# of FULL-DAY KINDERGARTEN

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EVANSVILLE-VANDERBURGH SCHOOL CORPORATION
Evansville, Indiana
1983

FOREWORD

The Evansville-Vanderburgh School Corporation began full-day, every-day kindergarten in four schools in the 1978-1979 school year. In 1980, an evaluation of the first two years of full-day kindergarten was published in a report entitled A Study of the Effectiveness of Full-Day Kindergarten. The report indicated that children who attended full-day kindergarten had higher achievement than a control group of children who attended half-day kindergarten.

Even though children who attended full-day kindergarten did well at the end of kindergarten and first grade, there was a question about whether or not there were any long-term benefits. Do children who attend full-day kindergarten continue to do well in the primary grades, or do the differences at the end of kindergarten tend to level out? Will the children suffer burn-out as a result of full-day kindergarten and have lower self-concepts and poor attitudes toward school? Are the parents as enthusiastic about the full-day kindergarten program when their children are in grades three and four as they were when their children had just completed kindergarten?

To answer these and other questions, data were collected from standardized tests, report cards, questionnaires, and interviews. The results of the study should provide direction for the school system in its quest for the best possible program for kindergarten-age children.

ACKNOWLEDGMENTS

In the spring of 1982 when the Board of School Trustees expressed interest in a follow-up study of full-day kindergarten, my first thought was of the magnitude of the task and the loss of evenings, weekends, and Christmas vacation time; and with these kinds of thoughts, I would have been reluctant to begin a longitudinal study of full-day kindergarten without their encouragement. Thanks to the direction of the Board the study was undertaken, and we now have knowledge about the long-range progress of children who attend full-day kindergarten. Therefore, appreciation is extended to the members of the Board of School Trustees for their wisdom in seeing the need for a longitudinal study of the program.

Dr. Carmen Andrew and Dr. Ralph Templeton of the University of Evansville served as consultants. They provided outstanding support throughout the year of the study.

The staffs of the four experimental and four control schools provided all information requested and administered several tests in addition to those normally given to students. They were all helpful and cooperative even when providing data during busy times. The full-day kindergarten teachers from the four experimental schools helped to design the questionnaires and opinionnaire and were always available when needed.

I want to express special gratitude to Sandy Flick and Thelma Schuble for typing the manuscript, to Harry Friley for layout and cover design, and to Carolyn Hoos and Virginia Thrasher for reviewing

the manuscript. They all gave many extra hours of dedicated service to the project.

Jack W. Humphrey
Director of Reading Services
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CHAPTER I

INTRODUCTION

The Evansville Public Schools initiated kindergarten in 1899 in two schools; within a few years, all the schools in the city had half-day kindergarten programs. Other schools outside Evansville but in Vanderburgh County did not have kindergarten until they were consolidated into the Evansville Public Schools or the Evansville-Vanderburgh School Corporation in the early 1960s.

Development of kindergartens in the United States has not been uniform (6). In 1965 fewer than half of eligible children attended kindergarten; presently, an estimated 95 percent of eligible children are enrolled in kindergarten. Florida has compulsory attendance while Mississippi offers no state support. Most states have half-day programs; however, several states are providing extended-day programs for some students, full-day programs for slow learners, full-day every other day, or full-day every day.

Disagreement on the content of the kindergarten program also exists. Traditionally, schools have stressed social and emotional skills and language development in kindergarten. Now, many educators are advocating formal direct teaching activities to help children develop cognitive and psychomotor skills in addition to social and emotional skills and language development. For example, Bailey, Durkin, Nurss, and Stammer (2) state that children have changed over the past two decades; consequently, better preparation of kindergarten teachers is necessary to provide concrete instruction based on children's experience and oral language.

Statement of Evansville Kindergarten Teachers

The following statement written by Evansville kindergarten teachers reflects their position concerning the present kindergarten program.

Today's kindergarteners, with their diverse abilities and experiences, need a program to focus on the overlapping basic skills. The full-day kindergarten program allows for an in-depth exploration of skills in the areas of social, emotional, physical, affective, and cognitive development. It allows children the opportunity to develop responsibility for themselves and their actions.

Children have varied maturational levels and experiential backgrounds; therefore, it is the responsibility of the kindergarten teacher to determine each child's state of development and guide his/her progress accordingly.

We further believe

- *That to give a child a good kindergarten experience is to give him/her an excellent start on the road to a satisfying and productive total school life.*
- *That kindergarten is not just a preparation for first grade, but that it occupies its own unique position in the child's school experiences.*
- *That the fostering or building of a child's self-concept needs attention at an early age. A feeling of worth and belonging developed in early childhood makes for security in coping with the problems he/she encounters.*
- *That the kindergarten child should be provided with many and varied experiences. Exposure without pressure must be ever present in the atmosphere of the kindergarten room. The full-day program allows flexibility and minimizes pressure caused by lack of time.*

That the child who leaves kindergarten happily anticipating the next step in the learning process has had a good experience.

The sum of these experiences will enable the child to live and work happily and purposefully with others. He/she will begin to understand the world about himself/herself and continue to develop as a worthy and useful human being.

1980 Study

The Evansville-Vanderburgh School Corporation began full-day, every-day kindergarten in January 1979. The children in four schools having full-day kindergartens in the 1978-1979 and 1979-1980 school years were selected as the experimental group and compared to children who attended half-day kindergarten in four control schools. These results were published in a report entitled A Study of the Effectiveness of Full-Day Kindergarten (1).

The objectives of the 1980 study involving four control and four experimental schools were as follows:

1. To determine the loss or gain of the cognitive growth in full-day kindergarten children during the pilot program.

2. To determine, using one evaluation instrument, a limited indication of the psychomotor, affective, and linguistic growth of full-day kindergarten children.

3. To develop and present a realistic program for the implementation of full-day kindergarten.

4. To test the null hypothesis that there was no difference between the children who participated in the full-day kindergarten program and those who attended the half-day program on the following: California Achievement Tests (4), Boehm Tests of Basic Concepts (3), Gates-MacGinitie Reading Tests (8), questionnaires, opinionnaires, interviews, task observations, and attendance records.

The results of the California Achievement Tests showed that, except in one case, all subtests and combined scores were significantly higher for full-day kindergarten students when compared to the subtests and combined scores of half-day kindergarten students. In 1979 the mean score for pre-reading skills for full-day students was 106.09 compared to a 96.50 mean score for half-day kindergarten students. This made the achievement level of full-day students 9.59 points higher than half-day students. In 1980 the full-day mean score in pre-reading was 102.38 compared to 95.70 for half-day students, which made the full-day 6.68 points higher than half-day. The mathematics results showed the full-day mean score higher by 4.22 points for 1979 and higher by 2.99 points for 1980.

The Boehm Tests of Basic Concepts were given to full-day kindergarten students only. Form A was given as a pretest in September of 1979, and Form B was administered in April of 1980 as a post-test. Scores obtained from Evansville's full-day kindergarten students were compared to the average socio-economic norms established for the Boehm Tests.

When the mean score of the pretest (36.25) for the Evansville full-day kindergarten students was compared to the norm group, average socio-economic status, it had a percentile rank of 65. This was compared to a 31.80 mean score for the norm group which had a percentile rank of 50. The mean score of full-day kindergarten students on the post-test (43.07) had a percentile rank of 85, using mid-year norms, and the norm group had a mean score of 35.30 which had a percentile rank of 45. This made the full-day kindergarten students rank 40 points higher on the percentile rank scale than the norm group.

Follow-up data on the 1978-1979 full-day and half-day kindergarten students were obtained from the Gates-MacGinitie Reading Tests that were administered in April 1979 to all first grade students. To make these results more valid, only full-day and half-day students who had attended kindergarten and first grade in the same school were used.

Results showed that the kindergarten students who attended full-day in 1978-1979 had significantly higher reading scores than the kindergarten students who attended half-day with the statistical t-test showing $t = 6.12$ and $p < .005$.

The total mean score for full-day was 64.19 compared to a total mean score of 50.41 for half-day students. In comparing the mean scores for vocabulary (38.24, 27.17) and for comprehension (25.95, 23.24), it was determined that the full-day kindergarten group was 11.07 points higher in vocabulary and 2.71 points higher in comprehension.

The opinions of full-day and half-day kindergarten students' parents concerning their children's total learning in kindergarten were obtained from a ten-item questionnaire. Parents' preferences and reasons for selecting full-day or half-day kindergarten were also solicited on this questionnaire.

The full-day kindergarten parents indicated that they were very pleased about the results of the program. When asked their choice, 120 selected full-day and five selected half-day.

The half-day kindergarten students' parents also indicated that they were pleased about their children's progress. When asked their choice, 63 selected full-day and 52 selected half-day. This

indicated that parents who had children complete a full-day program were very pleased about it but that those not exposed to the program were less certain about the benefits of full-day kindergarten.

Two opinionnaires were created to obtain teacher opinions toward full-day kindergarten. One was developed for full-day kindergarten teachers and the other for first grade teachers who had received full-day kindergarten students. A Likert Scale was used in the opinionnaire, and an analysis of the results showed that full-day kindergarten teachers tended to have favorable attitudes toward the full-day kindergarten concept and first grade teachers tended to be undecided.

Additionally, the full-day kindergarten teachers were interviewed concerning the advantages and disadvantages of the full-day program. The disadvantages included the large class size and an increased work load for teachers in planning for the work of aides, the preparation of lessons for a full day rather than a half day, and administrative tasks such as collecting money for lunch.

The advantages included children receiving a good noon meal; more time for formal instruction in reading and other basic subjects; more time for music, art, and physical education; time to reinforce skills; more time to work on an individual basis with children; more time for adult and child relationships; more time to participate in primary grade programs of the school; and the fact that children could come to and go from school with older brothers and sisters.

Data organized from the Kindergarten Task Observation Assessment were used to obtain a limited indication of the psychomotor, affective, and linguistic growth, as well as the cognitive growth of

full-day and half-day kindergarten students. This was developed to use first-hand observations as an evaluation technique. The statistical chi-square test of independence was used to determine whether there were any significant differences in the task performance of full-day and half-day kindergarten students. After the chi-square test of independence was performed, a significant difference was found in only one task where half-day students performed at a higher level than full-day students.

To determine if full-day was more tiring than half-day kindergarten, causing more illness or more absences toward the end of the week, attendance by the day was compiled for the 1979-1980 experimental and control groups. To learn if there were any significant differences in the attendance patterns of both groups, the chi-square test of independence was used.

The chi-square value of 0.05 indicated that there were no differences between the attendance pattern by days of full-day and half-day kindergarten students. Both groups had more absences on Monday and Friday with fewer on Wednesday.

Half-day students showed an average of 10.8 percent absences for a twenty-seven week period as compared to 8.5 percent absences from the full-day students. It was noted, however, that the number of students was not constant throughout the year due to the changing kindergarten enrollments.

The study was presented to the Evansville-Vanderburgh School Corporation Board of School Trustees in 1980. Since that time, seven schools were added to the full-day kindergarten program. By the fall of 1982, 22 teachers and 22.5 assistants were working with 700 kindergarten

children in 11 schools. Of these 700 children, 691, or 99 percent, had opted for the full-day program; and nine, or one percent were enrolled for a half-day program in these same schools. (Children in Evansville have several options. If they reside in a school attendance area with a full-day kindergarten program, they can attend full day, half day, or stay home. Children may transfer to the full-day program from other attendance areas which do not have a full-day program if they meet certain criteria and if space is available.)

Reasons for Full-Day Kindergarten

When five new schools were recommended for the full-day program in the spring of 1982, the following reasons were given to support the need for full-day kindergarten.

1. The results of the 1980 study indicated that children did better in their readiness test, had higher than anticipated scores in basic concepts, and continued to do better in reading at the end of the first grade.

2. Parents rated the program very high and preferred a full-day program when given a choice.

3. Teachers have more time to provide opportunities for learning at an appropriate level for each child.

4. Over half of the children in the United States receive some type of pre-kindergarten experience, and much of this experience is for a full day.

5. Space is available in schools, and teachers are available.

6. Children have more opportunities to become a part of the school because they can more frequently use facilities such as the gymnasium, cafeteria, auditorium, and library.

7. Children are attracted to the school system by the full-day kindergarten program. This is beneficial because, for every child enrolled in school, the Corporation received $928.98 in 1982 which could

amount to $11,612.25 for a child who would decide to stay in the school system from kindergarten to grade 12.

Concerns About Full-Day Kindergarten

At the same time, it was recognized that there were concerns about adding full-day kindergartens. The concerns were summarized as follows:

1. The cost is high. Teachers and assistants should not be added at a time when schools are in economic decline.

2. The full-day program is another example of government taking over tasks from parents rather than parents taking the responsibility to help provide an enriched background for children prior to first grade.

3. The full-day program puts too much pressure on five-year-old children, and there is no evidence that all the money and effort can result in better success in school.

Additional Studies

The 1980 report summarized findings available at that time concerning the extension of the kindergarten day. Three additional studies were located since that time that relate to the effect of full-day kindergarten:

Cleminshaw and Guidubaldi (5) compared half-day programs with full-day, alternate-day programs. The results demonstrated significant differences in academic and social skills favoring children attending full-day on an alternate-day basis. Tests used included the Metropolitan Readiness Test, Animal Crackers: A Test of Motivation to Achieve, and the Kohn Social Competence Scale. The report indicated

that a full-day program provided a longer span of time for teachers to promote effective learning experiences and that a more relaxing atmosphere provided by the full-day program may produce less anxiety in children.

A study was made on the effects of an extended-day kindergarten on first grade achievement by McClinton and Topping (7) in which the curriculum was not changed so that the effect of time alone could be measured. A rating scale was constructed for first grade teachers to complete. The results from the first grade teachers indicated that they rated the children who had attended an extended-day kindergarten as more capable than half-day kindergarten children. The extended-day program gave the children a head start on the children from the half-day program.

A longitudinal study of children in the Cincinnati Public Schools who began a full-day ESEA Title I kindergarten program in 1970 was conducted by Nieman and Gastright (9). The full-day kindergarten children were compared to children who attended half-day kindergarten. The children in the full-day program scored significantly higher than the half-day group on the Metropolitan Readiness Test. These children were later tested in the fourth and eighth grades, and total reading and total mathematics subtest scores on the Metropolitan Achievement Test were compared. They found that the significant difference in favor of the full-day program was maintained. Also, proportionately fewer students from the full-day program repeated a grade.

These studies along with the Evansville-Vanderburgh School

Corporation 1980 report indicate that children who complete full-day kindergarten appear to have higher academic and social skills than children who attend half-day kindergarten. Does the initial difference found in the 1980 Evansville study continue in later grades? The following chapters attempt to answer this important question.

References

1. A Study of the Effectiveness of Full-Day Kindergarten. Evansville: Evansville-Vanderburgh School Corporation, 1980, 106 pp.

2. Bailey, M. H., Durkin, D., Nurss, J. R., and Stammer, J. D. "Preparation of Kindergarten Teachers for Reading Instruction." The Reading Teacher, December 1982, pp. 307-311.

3. Boehm, Ann E. Boehm Tests of Basic Concepts. New York: The Psychological Corporation, 1970.

4. California Achievement Tests. Monterey: CTB/McGraw-Hill, 1970.

5. Cleminshaw, H. K., and Guidubaldi, J. "The Effect of Time and Structure on Kindergarten Student Social and Academic Performance." The Journal of Educational Research, November/December 1979, pp. 92-101.

6. Erickson, J. "Kindergartens Far From Maturity." The Champaign-Urbana News-Gazette, October 17, 1982, p. A-2.

7. McClinton, S. L., and Topping, C. "Extended-Day Kindergartens: Are the Effects Intangible?" Journal of Educational Research, September 1981, pp. 39-40.

8. McGinitie, Walter H., Gates-MacGinitie Reading Tests. Boston: Houghton-Mifflin Company, 1978.

9. Nieman, R. H., and Gastright, J. F. "The Long-Term Effects of Title I Preschool and All-Day Kindergarten." Phi Delta Kappan, November 1981, pp. 184-185.

CHAPTER II

METHOD

The purpose of the study was to follow up children who completed full-day,every-day kindergarten in 1979 and 1980 to determine whether or not the students exhibited any long-term benefits. Data were collected from standardized tests, report cards, questionnaires, and interviews to test the null hypothesis that there was no difference in children who attended the 1978-1979 and 1979-1980 full-day and half-day programs. Thus, the study was based on the expectation that children who attended the 1978-1979 and 1979-1980 full-day,every-day kindergarten would

1. Have positive attitudes about full-day kindergarten.
2. Have parents with positive attitudes about full-day kindergarten.
3. Have first, second, and third grade teachers with positive attitudes about full-day kindergarten.

Further, when compared with students who attended half-day kindergarten in 1978-1979 and 1979-1980, the children who attended the full-day kindergarten would

4. Display a higher self-concept, as measured by the Piers-Harris Children's Self-Concept Scale.
5. Have more positive attitudes toward school, as measured by the Survey of School Attitudes.
6. Achieve higher academic report card grades.
7. Achieve higher conduct marks on report cards.
8. Have a lower rate of being retained in a grade.
9. Achieve higher handwriting ratings, as measured by the Evaluation Scale--Cursive.

10. Achieve higher reading scores, as measured by the Gates-MacGinitie Reading Tests.

11. Achieve higher academic scores, as measured by the Comprehensive Tests of Basic Skills.

Experimental and Control Groups

Four schools began full-day kindergarten in the 1978-1979 school year. The children enrolled in 1978-1979 and 1979-1980 were all included in the original experimental group. There were 187 children enrolled in the four experimental schools in June 1979 and 223 enrolled in the same four schools in June 1980. In this study, only those children still enrolled in the same school in grades three and four were included. Of the 187 students in the 1978-1979 group, 81 were still enrolled in the same school. In the 1979-1980 group, 115 children out of the 223 remained in the same school.

The original control group was composed of half-day kindergarten students from four schools chosen to match the socio-economic levels of the four experimental schools. There were 223 half-day kindergarten students enrolled in June 1979 and 203 students enrolled in June 1980 in these four schools. As with the experimental group, only those children still enrolled in the same school in grades three and four were included in the control group for this study. Of the original 223 students attending in 1978-1979, 108 were still enrolled in the same school; and in the 1979-1980 group, 114 of the original 203 remained in the same school.

The number of children in the experimental and control groups varied in the questionnaire and test results due to absences and

transfers or withdrawals during the fall of 1982. Effort was made to obtain results from as many students as possible without causing classes to be disrupted or teachers to be overburdened.

Results for the 1978-1979 and 1979-1980 groups are reported separately in all areas of the study except for the Parent Questionnaire and Teacher Opinionnaire results which are reported together for the two groups.

Table I gives an overview of the enrollment in the original and present studies.

TABLE I

STUDENTS in ORIGINAL STUDY

and PRESENT STUDY

Enrollment	Number in Full-Day Kindergarten	Number in Half-Day Kindergarten
Enrolled in June 1979	187	223
Enrolled in Same School, June 1982	81	108
Enrolled in June 1980	223	203
Enrolled in Same School, June 1982	115	114

Evaluation Instruments and Data Collection

Two questionnaires, one opinionnaire, report card information, four standardized tests, and one criterion-referenced test were used

to compare the experimental and control group children.

Student Questionnaire

A Student Questionnaire to be given only to full-day students to determine their attitudes about full-day kindergarten was developed by a team of kindergarten teachers. Three or four stations were set up in the kindergarten room of each experimental school, and third and fourth grade children were brought to the room. The evaluators read each question to individual students and recorded answers of yes or no with the exception of one item. (See the Appendix for a copy of the Student Questionnaire.) The questionnaire was administered in the fall of 1982.

Parent Questionnaire

A Parent Questionnaire was developed by a team of kindergarten teachers and mailed to all parents of children who had completed the full-day kindergarten program in either 1979 or 1980 and were still enrolled in the same school. (A copy of the Parent Questionnaire is in the Appendix.) The purpose of the questionnaire was to determine the attitudes that parents of the full-day kindergarten children had about the program after their children had completed either second or third grade. The questionnaire included items about social skills, academic achievement, and learning skills and asked the parents to express their feelings about and preferences for the full-day program. Comments from parents were solicited as the last part of the questionnaire mailed during the fall of 1982.

Teacher Opinionnaire

Kindergarten teachers also developed a Full-Day Kindergarten Opinionnaire for primary grade teachers. (A copy of the Full-Day Kindergarten Opinionnaire is included in the Appendix.) The opinionnaire was given only to the first, second, and third grade teachers of the four experimental schools during the fall of 1982. The purpose of the opinionnaire was to determine the attitudes of teachers toward the full-day program. For reference purposes, a list of children who had attended the full-day kindergarten was provided to each teacher.

Piers-Harris Children's Self-Concept Scale

In the fall of 1982, the Piers-Harris Children's Self-Concept Scale was given to all third and fourth grade children who had been in the original experimental and control groups. The test was designed for research on the development of children's self-attitudes and the correlates of these attitudes. The author (7) reported that the reliability coefficients ranged from .78 to .93 using the Kuder-Richardson Formula 21.

The test items were based on Jersild's list of categories (5) about what children like and dislike about themselves. The categories were as follows: physical characteristics and appearance; clothing and grooming; health and physical soundness; home and family; enjoyment and recreation; ability in sports and play; ability in school and attitudes toward school; intellectual abilities; special talents; just me and myself; and personality, character, inner resources, and emotional tendencies.

Survey of School Attitudes

The Survey of School Attitudes, Primary Level, Form A, was given to all children in the third grade who had been in the original experimental and control groups. The Survey of School Attitudes, Intermediate Level, Form A, was given to all fourth grade children who had been in the original experimental and control groups. Both of these grade levels were tested in the fall of 1982.

The Survey of School Attitudes was designed to measure student reactions to reading and other language arts, mathematics, science, and social studies. The test included 60 Likert-type items distributed equally across the four curriculum areas. The student responded by marking a smiling, neutral, or frowning face which represented like, not sure or don't care, and dislike, respectively. The test format for third grade called for students to write answers in the test booklet, and the fourth grade students recorded answers on a separate sheet.

The author (4) reported that split-half and alpha reliabilities with grades for the primary test ranged from .77 to .91 with a median of .85. Alternate-form reliabilities ranged from .52 to .65. The results of the intermediate test for the fourth grade showed that the split-half and alpha reliabilities ranged from .82 to .90 and the alternate-form reliability, .74 to .83.

Report Card Grades

Children received Progress Reports (report cards) four times each year in grades one to three. The marks children received in school

subject achievement were S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement) with S being high, I lower than S, and N the lowest possible mark. Marks were given in the first grade in mathematics, reading, and handwriting. Children in the second grade received marks in mathematics, reading, handwriting, and spelling. In the third grade, marks were given in mathematics, reading, handwriting, spelling, English, social studies, science, art, and music.

At the end of each year, the four report card marks were recorded on a composite report along with an average of the marks. This average was used to compare the experimental and control groups. The 1978-1979 groups had progress report averages for first, second, and third grades; and the 1979-1980 groups had average marks for the first and second grades.

Report Card Conduct Marks

Four times a year, each child in the primary grades was given conduct marks on the Progress Report. The report listed eight areas under the topic "Growth as an Individual." These areas were as follows: respects authority, shows self-confidence, uses self-control, follows directions, works independently, uses time wisely, uses materials wisely, and puts forth best effort. Four other areas were marked under "Growth as a Member of the Group." These four areas were works well with others, listens attentively, obeys playground rules, and respects property of others. The marks for all twelve areas were S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement) with S being high, I lower than S, and N the lowest possible

mark.

Each child thus had four report card marks in 12 conduct areas. These 48 marks were placed on a composite report at the end of the year, and averages were determined for each of the 12 areas. These averages were used to compare the experimental and control groups. The 1978-1979 groups had conduct mark averages for the first, second, and third grades; and the 1979-1980 groups had conduct mark averages for the first and second grades.

Retention

The rate of retention information was obtained from the Data Processing Center of the Evansville-Vanderburgh School Corporation. The children enrolled in kindergarten in the four experimental and four control schools in June 1979 and June 1980 were compared to the third and fourth grade list of children who were still in the same school in June 1982 to determine those promoted to a higher grade and those retained in the same grade for another year. Therefore, the rate of retention data refers only to those children from the original group who were still enrolled in the same school in June 1982 and does not involve children in the original study who had moved to other schools.

Handwriting Evaluation Scale — Cursive

The Zaner-Bloser Evaluation Scale--Cursive for the third grade was used to evaluate the handwriting of the third grade children who had been in the 1979-1980 experimental and control groups, and the Zaner-Bloser Evaluation Scale--Cursive for the fourth grade was used

to evaluate the handwriting of the fourth grade children who had been in the 1978-1979 experimental and control groups. The tests were administered in the fall of 1982.

The teacher wrote a sentence on the chalkboard, and the children practiced writing the sentence one time on third or fourth grade paper which was provided to teachers along with the directions. Then the children wrote the sentence on the third or fourth grade paper using their best handwriting.

The Evaluation Scale--Cursive provided five examples of handwriting of the sample sentence which were illustrations of excellent, good, average, fair, and poor handwriting for grades three and four. It had five areas to be rated. These were letter formation, slant, spacing, alignment and proportion, and line quality. The definition used for each of these terms was that provided in The Language Arts in Childhood Education (1).

The test papers were rated by a university professor and two university graduate students in education. Before scoring the handwriting samples, they were trained to administer the Evaluation Scale--Cursive. In the training session, the five areas were described. Then each evaluator independently scored ten randomly chosen handwriting samples. After discussing the ratings for each sample and arriving at a consensus on the score, the evaluators were given one-third of the handwriting samples to score. The evaluators received a randomly selected third of the handwriting samples from each of the experimental and control schools for both third and fourth grades.

Gates-MacGinitie Reading Tests

The children who finished kindergarten in the spring of 1980 were given the Gates-MacGinitie Reading Tests, Level B, Form 2, in the spring of 1982 when these children were in the second grade. The children who finished kindergarten in the spring of 1979 were given Level C, Form 1, of the same tests in the spring of 1982 when they were in the third grade. These results were taken from tests administered to all second and third grade children in the school system as a part of the Chapter I reading program and the district's regular reading program. The hand-scored edition of the tests was used in the second and third grades, and the children marked their answers in the test booklets.

Levels B and C include a vocabulary test and a comprehension test. The vocabulary test has 45 items consisting of a test word followed by four words or phrases, and the student's task was to choose the word or phrase that matched the test word. The comprehension test has 44 questions. There are two questions for each of the 22 different passages. The Level B test has 80 percent literal questions and 20 percent inferential questions, and the Level C test has 65 percent literal questions and 35 percent inferential questions.

The author (6) reported Kuder-Richardson Formula 20 reliability coefficients as follows: Level B, Form 2, vocabulary .93 and comprehension .92; and Level C, Form 2, vocabulary .94 and comprehension .93.

Comprehensive Tests of Basic Skills

The Comprehensive Tests of Basic Skills (2), Form U, Level E, Complete Battery, 1981 edition, were given to all Evansville-Vanderburgh School Corporation third grade students in the spring of 1982, and results were obtained for the children in the 1978-1979 experimental and control groups.

The Comprehensive Tests of Basic Skills provided information in the following areas: word attack, vocabulary, comprehension, and total reading; spelling, mechanics, expression, and total language; computation, conclusions and applications, and total mathematics; total battery; science; and social studies.

The Comprehensive Tests of Basic Skills reading content included various word attack skills. The vocabulary items measured categorization, same meaning words, words in context, multimeaning words, and word affixes. The comprehension items measured skills in understanding sentence meaning, passage details, character analysis, main ideas, generalization, written forms, and author techniques.

The spelling items measured application of rules for consonants, vowels, and various structural forms.

Capitalization and punctuation skills were a part of the language mechanics section. Language expression measured ability in use of parts of speech, formation and organization of sentences, writing for clarity, and application of various writing styles.

The mathematics computation items measured addition, subtraction, multiplication, and division. The application of mathematics was measured with items in numeration, number sentences,

number theory, problem solving, measurement, and geometry.

The science section had content from the physical and life sciences and included botany, zoology, physics, chemistry, and ecology. Skills were measured in the understanding of scientific principles and phenomena and the ability to classify, quantify, and interpret data.

Social studies content included geography, economics, history, political science, and sociology. Visual stimuli were used to permit the testing of social studies concepts independent of reading skills.

The Kuder-Richardson Formula 20 reliability coefficients for the Comprehensive Tests of Basic Skills were as follows: Test 1, Reading Word Attack, 0.9607; Test 2, Reading Vocabulary, 0.9775; Test 3, Reading Comprehension, 0.9729; Test 4, Spelling, 0.9678; Test 5, Language Mechanics, 0.9537; Test 6, Language Expression, 0.9594; Test 7, Mathematics Computation, 0.9621; Test 8, Mathematics Conclusions and Applications, 0.9625; Test 9, Science, 0.9424; and Test 10, Social Studies, 0.9640.

Data Analysis

The results from the Student Questionnaire, Parent Questionnaire, and Teacher Opinionnaire were tabulated and summarized.

The statistical t-test was used on the data collected from the Piers-Harris Children's Self-Concept Scale, Survey of School Attitudes, Evaluation Scale--Cursive, Gates-MacGinitie Reading Tests, and the Comprehensive Tests of Basic Skills.

The chi-square test of independence was used on the data collected on report card academic grades, report card conduct marks, and the rate of retention.

References

1. Burns, Paul C., and Broman, Betty L. The Language Arts in Childhood Education. Boston: Houghton-Mifflin Company, 1979.

2. Comprehensive Tests of Basic Skills. Monterey: CTB/McGraw-Hill, 1981.

3. Evaluation Scale -- Cursive, Grades 3 and 4. Columbus: Zaner-Bloser, 1979.

4. Hogan, Thomas P. Survey of School Attitudes, Manual for Administering and Interpreting. New York: Harcourt, Brace, Jovanovich, Inc., 1975.

5. Jersild, Arthur T. In Search of Self: An Exploration of the School in Promoting Self-Understanding. New York: Teachers College, Columbia University, Bureau of Publications, 1952.

6. MacGinitie, Walter H. Teacher's Manual for Gates-MacGinitie Reading Tests, Second Edition. Boston: Houghton-Mifflin Company, 1978.

7. Piers, Ellen V. Manual for the Piers-Harris Children's Self-Concept Scale. Nashville: Counselor Recordings and Tests, 1969.

CHAPTER III

ANALYSIS of RESULTS

All data that were collected, compiled, and analyzed to lay the foundation to accept or reject the null hypothesis are presented in this chapter. The information from each evaluation instrument and statistical procedure are presented.

Student Questionnaire

The attitudes of third and fourth grade children who had completed kindergarten in 1979 or 1980 were obtained from a ten-item Student Questionnaire. Nine of the items called for yes or no responses; the tenth item asked, "What do you remember most about your year in kindergarten?"

Table II shows the responses by third grade children to the first nine questions listed on the Student Questionnaire. There were 111 children who were given the questionnaire. In some instances the children did not respond, so the number of answers for questions varies from 104 to 111.

Eighty-five percent of the children felt that they were more grown up when they attended school full day instead of half day. Eighty-nine percent of the children were not concerned about being away from their mothers or sitters when they attended kindergarten full day.

The children were able to eat in the cafeteria when they attended full-day kindergarten, and 89 percent of the children said that they liked eating there.

TABLE II

GRADE THREE

STUDENT QUESTIONNAIRE RESULTS

for 1979-1980 FULL-DAY KINDERGARTEN GROUP

ITEMS 1-9

Item	N	Yes		No	
		f	%	f	%
1. Did you feel more grown up when you got to go to school all day?	104	88	85	16	15
2. If you went to school only half day, you would be able to spend more time with mother or your sitter. When you went to full-day kindergarten, did it bother you to be away from them?	105	12	11	93	89
3. Half-day students do not get to eat in the cafeteria. Did you like eating in the school cafeteria when you went to full-day kindergarten?	111	99	89	12	11
4. Half-day students are only able to spend a short time each day using the blocks, paints, and playhouse. Were you glad you went to school a full day so you could spend more time with these activities?	108	108	100	0	0
5. Because you had more time to learn your letter names and sounds than those students in half-day kindergarten, do you think it was easier for you to learn how to read in the first grade?	108	105	97	3	3
6. In full-day kindergarten, you were more often able to work on math activities. Due to this you were able to work on adding and subtracting. Did this help you in first grade?	106	104	98	2	2
7. A student that goes to school half day gets to have art or music two or three times a week. When you were in full-day kindergarten you were able to have those subjects more often. Did you like this?	107	104	97	3	3
8. Some children are frightened when they start first grade because they have not been away from home for a full day. Were you frightened when you went to the first grade?	108	38	35	70	65
9. Are you glad you went to full-day kindergarten?	107	107	100	0	0

Several questions concerned activities that children were able to do because the full-day kindergarten allowed more time. The children were very positive that the extra time was useful. They responded 100 percent that they were glad to have had more time to use blocks, paints, and the playhouse; 97 percent that it was easier to learn how to read in the first grade; 98 percent that the mathematics work helped them in first grade; and 97 percent that they liked having music and art more often.

Thirty-five percent of the children were frightened when they entered the first grade; and 65 percent indicated that they were not frightened. All 107 children who responded to item nine stated that they were glad they had gone to full-day kindergarten.

Table III lists the number and percentage of the first response only of children when asked, "What do you remember most about your year in kindergarten?" Children most frequently gave responses that were in the area of play, which included the playhouse, toys, playing outside, or just playing The 25 percent of responses supports the importance of play (2), at least as first choice activities of children.

Table IV shows the responses of fourth grade children to the first nine questions listed on the Student Questionnaire. Seventy-one of the children who attended full-day kindergarten were in school on the days that the questionnaire was administered. The number of responses varied from 69 to 71 because the children did not respond to all of the items.

Ninety percent of the children felt that they were more grown up

TABLE III

GRADE THREE

STUDENTS' FIRST RESPONSES to ITEM 10*

for 1979-1980 FULL-DAY KINDERGARTEN GROUP

Response	f	%
Play	27	25
Painting	17	16
Group Activities	10	9
Working with Papers	9	8
Storytime	7	6
Being Fun	7	6
Art Projects	6	6
Nothing Special	6	6
Music	5	5
Nice Teacher	4	4
Rocking in Rocker	3	3
Snacks	2	2
Field Trips	2	2
Show and Tell	1	1
Nap Time	1	1
Doing Tests	1	1
N	108	

*Item 10: What do you remember most about your year in kindergarten?

TABLE IV

GRADE FOUR

STUDENT QUESTIONNAIRE RESULTS

for 1978-1979 FULL-DAY KINDERGARTEN GROUP

ITEMS 1-9

Item	N	Yes		No	
		f	%	f	%
1. Did you feel more grown up when you got to go to school all day?	70	63	90	7	10
2. If you went to school only half day, you would be able to spend more time with mother or your sitter. When you went to full-day kindergarten, did it bother you to be away from them?	71	16	23	55	77
3. Half-day students do not get to eat in the cafeteria. Did you like eating in the school cafeteria when you went to full-day kindergarten?	69	58	84	11	16
4. Half-day students are only able to spend a short time each day using the blocks, paints, and playhouse. Were you glad you went to school a full day so you could spend more time with these activities?	71	68	96	3	4
5. Because you had more time to learn your letter names and sounds than those students in half-day kindergarten, do you think it was easier for you to learn how to read in the first grade?	69	67	97	2	3
6. In full-day kindergarten, you were more often able to work on math activities. Due to this you were able to work on adding and subtracting. Did this help you in first grade?	68	65	96	3	4
7. A student that goes to school half day gets to have art or music two or three times a week. When you were in full-day kindergarten you were able to have those subjects more often. Did you like this?	71	68	96	3	4
8. Some children are frightened when they start first grade because they have not been away from home for a full day. Were you frightened when you went to the first grade?	71	28	39	43	61
9. Are you glad you went to full-day kindergarten?	69	68	99	1	1

when they attended school full day instead of half day. Seventy-seven percent of the children were not concerned about being away from their mothers or sitters when they attended kindergarten full day.

Eighty-four percent of the children indicated that they liked eating in the cafeteria as a result of the full-day kindergarten program.

Children had more time for play, reading, mathematics, art, and music in the full-day program. They responded 96 percent that they were glad to have had more time to use blocks, paints, and the playhouse; 97 percent that it was easier to learn how to read in the first grade; 96 percent that the mathematics work helped them in first grade; and 96 percent that they liked having music and art more often.

Thirty-nine percent of the children were frightened when they entered first grade, and 61 percent indicated that they were not frightened. Ninety-nine percent stated that they were happy that they attended full-day kindergarten.

Table V lists the number and percentage of the first response only of students to question ten. Thirty percent of the children listed play as what they remembered most about their year in kindergarten.

It was not the intent of this report to compare students' attitudes between full-day and half-day kindergarten but rather to determine whether or not the students who attended full-day kindergarten did have positive attitudes toward their kindergarten experience after completing second or third grade. The results of the

TABLE V

GRADE FOUR

STUDENTS' FIRST RESPONSES TO ITEM 10*

for 1979-1980 FULL-DAY KINDERGARTEN GROUP

Response	f	%
Play	21	30
Painting	10	14
Music	7	10
Group Activities	7	10
Nice Teachers	6	8
Working with Papers	5	7
Art Projects	5	7
Storytime	3	4
Fun	2	3
Had a Best Friend	2	3
Birthday Time	1	1
Nothing Special	1	1
Doing Tests	1	1
N	71	

*Item 10: What do you remember most about your year in kindergarten?

Student Questionnaire for grades three and four indicated that children had positive attitudes toward their full-day kindergarten experience. It should be noted that a similar questionnaire used with the control group might have revealed the same attitudes toward a half-day kindergarten experience.

Parent Questionnaire

A total of 196 Parent Questionnaires were mailed, and 92 parents or 47 percent returned them. Table VI lists the parent responses to the first 14 items. The total number varied from 89 to 93 because some of the parents did not mark all of the items, and one questionnaire had question eight marked both no and undecided.

The majority of parents indicated that their children learned more in the full-day kindergarten than they would have learned in half-day kindergarten. Ninety-five percent said yes, one percent said no, and four percent were undecided.

Ninety-five percent of the parents thought that their children were better prepared for first grade. None of the parents thought that their children would have learned more in a half-day program, but five percent were undecided as to whether or not their children were better prepared as a result of the full-day program.

Eighty-four percent of the parents indicated that they believed their children learned more self-control in the full-day kindergarten program. Three percent of the parents did not believe that their children learned more self-control, and 12 percent were

TABLE VI

PARENT QUESTIONNAIRE RESULTS

for FULL-DAY KINDERGARTEN

ITEMS 1-14

Item		Yes		No		Undecided	
	N	f	%	f	%	f	%
1. As a result of the full-day kindergarten program, my child learned more than he would have in a half-day program.	92	87	95	1	1	4	4
2. As a result of the full-day kindergarten program, my child was better prepared for first grade.	92	87	95	0	0	5	5
3. As a result of the full-day kindergarten program, my child learned more self-control.	90	76	84	3	3	11	12
4. As a result of the full-day kindergarten program, my child became more socially adjusted.	90	79	88	3	3	8	9
5. As a result of the full-day kindergarten program, my child gained more self-confidence.	90	81	90	1	1	8	9
6. As a result of the full-day kindergarten program, my child became a better listener.	92	73	79	3	3	16	17
7. As a result of the full-day kindergarten program, my child was better able to express himself verbally.	89	76	85	1	1	12	13
8. As a result of the full-day kindergarten program, my child was better able to follow directions.	93	78	84	3	3	12	13
9. As a result of the full-day kindergarten program, my child learned to enjoy music.	91	67	74	5	5	19	21
10. As a result of the full-day kindergarten program, my child's skills in handwriting, cutting, coloring were greatly improved.	91	75	82	4	4	12	13
11. As a result of the full-day kindergarten program, my child was better prepared for reading.	92	87	95	0	0	5	5
12. As a result of the full-day kindergarten program, my child was better prepared for mathematics.	92	85	92	1	1	6	7
13. As a result of the full-day kindergarten program, my child developed body coordination.	91	72	79	1	1	18	20
14. As a result of the full-day kindergarten program, better home-school relationships have developed.	90	70	78	2	2	18	20

undecided.

Most of the parents, 88 percent, thought their children became more socially adjusted as a result of the full-day kindergarten program. However, three percent did not agree, and nine percent were undecided. Children gained more self-confidence in the full-day kindergarten according to 90 percent of the parents. One percent did not agree, and nine percent were undecided.

Seventy-nine percent of the parents indicated that their children became better listeners as a result of the full-day program. Three percent did not think that their children were better listeners, and 17 percent were undecided. Eighty-five percent of the parents believed that their children were better able to express themselves verbally. One percent did not agree; 13 percent were undecided.

Eighty-four percent of the parents thought that their children were better able to follow directions. Three percent did not agree, and 13 percent were undecided. Seventy-four percent of the parents indicated that their children learned to enjoy music. Five percent stated that their children did not learn to enjoy music, and 21 percent were undecided.

Eighty-two percent of the parents believed that their children's skills in handwriting, cutting, and coloring were greatly improved. Four percent did not agree, and 13 percent were undecided. Children were better prepared for reading as a result of full-day kindergarten according to 95 percent of the parents. Although no parents disagreed, five percent were undecided.

Ninety-two percent of the parents indicated that their children were better prepared for mathematics. One percent did not agree;

seven percent remained undecided. Seventy-nine percent of the parents agreed that their children developed body coordination. One percent did not agree, and 20 percent were undecided.

Seventy-eight percent of the parents believed that better home-school relationships were developed. Two percent did not agree, and 20 percent were undecided.

Three additional questions were asked on the Parent Questionnaire that are not included in Table VI. Parents were asked how they felt about the program at the end of the year. Eighty-eight parents, or 97 percent, were pleased: one parent, or one percent, was not pleased; and two parents, or two percent, were undecided.

Sixty-six parents, or 80 percent, felt positive when their child first entered the full-day kindergarten; one parent, or one percent, felt negative; and 15 parents, or 18 percent, were undecided. When asked which they preferred, 79 parents, or 92 percent, preferred full-day kindergarten; and two parents, or two percent, preferred half-day kindergarten.

Parents were asked to make comments on the questionnaire, and 46 did so. All of the comments made by parents follow.

Comments by Parents from the Parent Questionnaire

I feel that having the children for a full-day helps the teacher to spend more time on each phase of education. I feel this is very beneficial to the children. I had experience with both half-day and full-day kindergarten, and the full day, I feel, is definitely more worthwhile.

I think the full-day kindergarten is wonderful. The children seem to learn so much more and are better adjusted to first grade. I have had one in half-day and one in full-day and one going next year. So I really think the all-day kindergarten is great.

All-day kindergarten better prepares children for a full day of school without the strict discipline of first grade.

My daughter would have found a two-hour kindergarten a step backwards after attending nursery school and day-care full-time at age 4.

As a working mother I was happy with all-day kindergarten because I didn't have to worry about transportation either to or from school in mid-afternoon. Also, there was more time for new and unique learning experiences such as field trips, making butter and peanut butter, etc.

Some of the questions do not fit the program, or maybe the yes, no, and undecided answers do not fit. But my son was always ready for the next day and in a hurry for class to begin.

My child was in the half-day program for half of the school year. When she started into the full-day program, she began to be relaxed and enjoy school more. There is no doubt that they do learn much more in the all-day program.

Full-day kindergarten gives the child a better picture of what school will be like in the first grade and on up. I don't recommend full-day for the younger child.

My daughter was in the first 1/2 year pilot program. I really felt it made a great difference in her school attitude. I wish her older brother could have been in all-day kindergarten. He really needed it as far as self-confidence and social adjustment.

Should be available in all schools.

I like the program. I am a working mother and I didn't have to worry about my child.

As long as we keep the class under 30 students, I think it will work--over that, they don't get the attention they need.

If they would start out for one month of half-day school, then change over to the full-day it would prepare all the children for the full-day. You have to remember not all children go to nursery school.

Our son was in the first group that had all-day kindergarten. He had 1/2 year of the half-day kindergarten and then was switched to full-day. It worked out for him to have started 1/2 day and then worked into full-day.

As a result of having spent two years in nursery school, I felt my son was ready for full-day kindergarten.

Full-day kindergarten still is not for all five-year-olds--they're just not ready.

I liked full-day because my daughter learned easily and enjoyed her teacher.

My children had been used to being away from home because of my working for several years. They were ready for the full-day program. Some may not be...

I think full-day kindergarten is the best idea the school corporation has come up with in a long time and it is great for the kids. They really learn a lot more this way. All schools should have the program.

Our kindergarten teacher made the difference for my son. Her total commitment headed him in the right direction, and that was an all-day job.

It's difficult to know what my son would be accomplishing if he had gone to kindergarten 1/2 day, but I was very happy with his kindergarten experience.

I believe the full-day kindergarten is a great program--especially with so many working mothers. I feel it also prepares them for all-day school the next year.

There were too many students in the kindergarten classroom. There were 53 in one room which I believe was too many even with the number of teachers and aides.

Even though our children have excellent home relationships, self-control and self-confidence, etc., all-day kindergarten has helped to improve these qualities they have. Thanks for helping our children become better prepared for the future.

For my child full-day kindergarten was a wonderful experience. I'm not sure all children at this age are mature enough to go into an all-day learning program.

It was what my child needed. It really helped us.

I think that children are ready for school at a younger age now, and a full-day kindergarten was a positive step to get them learning when they are interested and eager to do so.

My son started kindergarten on a 1/2 day basis. He started full-day the second semester when they first started the trial program. The full-day was a decided improvement. My son took more interest going all day. He said what he enjoyed most was having more time to spend on each subject and project.

The full-day program is excellent! Keep it up!

What is most needed is smaller classes so teachers can work with each child on his own level. My child is bright, and I hear from other

parents of bright youngsters that these kids are ready to move on to new material--not usually covered in kindergarten. My child was ready to read, but got mostly pre-reading activities. What he did gain in kindergarten was a feeling that he would handle school and its social situations well.

It is great for children who are ready to be away from home for that length of time.

Half-day kindergarten doesn't provide enough time for anything productive. Too many children are getting more from preschool than kindergarten provided.

I feel for a child to attend full-day kindergarten, that child should be at least 5½ years old and should attend a nursery school for at least one year.

I think all kids should have all-day kindergarten because it helps them to get better adjusted and it helps prepare them for the first grade. They really learn more from the all-day program. As far as the half-day program, I found they didn't learn as much...because they no more get to school, than it's time to go home again.

My little girl went a half day for one semester, and then they changed it to all day. I think it helped her a lot to get ready for all-day first grade!

Both my children have had full-day kindergarten and have sincerely benefitted. In the 1980's a good portion of the pre-school population is attending day-cares and/or nursery schools; and they need the changes, the challenge, and have already covered all the material (plus more) that their parents covered (those that are products of the 1950's) when they completed first grade. Times have changed and our schools must change accordingly. Full-day kindergarten is far superior to day-care centers--all day, every day.

I have had two children that attended full-day kindergarten and two that attended half-day, and I feel that the two that attended full-day learned much more. I feel that all boys and girls this age should have the opportunity to attend full-day kindergarten.

I was glad to see the full-day kindergarten in action. My older children were in half-day kindergarten and didn't have time to accomplish anything. I saw a great difference.

It is impossible for us to know if our son learned more or developed more fully his learning skills by attending full-day kindergarten. John attended the half-day program for the first semester and the full-day program for the second semester. We feel that John became overtired at attending the full-day session. He often fell asleep coming home on the school bus, even though he had sufficient sleep each night. Our oldest son seemed to learn much more in kindergarten

than our youngest did. Although, he attended the half-day session. We believe that the child's intelligence and the early development of his learning skills are more important in determining his success in kindergarten than the amount of time spent in the classroom.

My first child started kindergarten in the first year of full-day, and I thought it was terrific. For him, not for me. It wasn't a babysitting service as I have a younger child entering kindergarten next year, and all of us are looking forward to it. It is a big job for the teacher, but the teacher is patient and terrific!

It is difficult to answer your questionnaire accurately because there is really no basis for comparison. In almost any of the categories, the same end result might have been achieved in a half-day program; and I am still not sure which is the better program. I don't think that being in school all day necessarily means that a child will learn more because there are too many variables--the age of the child, the teacher, and the classroom situation, all play a part. In short, I am still undecided about whether the full-day program is actually better for the child. Both of my children's kindergarten experiences have been good ones. But I don't think the fact that one was all day made it any better.

The reason I was undecided about the first question is he had a very good teacher, and I thought she did well with the 1/2 day session. It was the first year and we only had from February to June and probably now they have a lot of things ironed out, and my child enjoyed the full-day. When it first started I didn't know how it was going to work with one teacher and an aide but now at our school we have two kindergartens and I'm glad because the children are probably being prepared for first grade!

I think it was great!

I was really pleased with my son and the all-day kindergarten. He did learn a lot more from the all-day kindergarten I thought than if he went to the half-a-day. He did pick things up quickly. And I was really pleased with his teachers. They took an interest in the children.

Full-day kindergarten prepares a child better than 1/2 day. They have more time to spend on each subject they are to learn about. It also prepares them to be away from home for a full day since first grade starts their full day anyway. I have talked with other mothers about this, and I have not heard one negative word about full-day kindergarten.

I was very pleased with the program and have recommended it to many other parents. Today's children are ready to learn more at an earlier age, and I feel this program touched on each subject just enough to give the children that extra boost they need for grade school. I've compared my child's (now a third grader)

progress with that of children who only go to a half-day kindergarten or parochial school, and he is way ahead of them. I have nothing but praise for the full-day program.

Teacher Opinionnaire

All 25 teachers in the four full-day experimental schools completed the Teacher Opinionnaire. Nine of the teachers were from grade one, eight from grade two, and eight from grade three. The opinionnaire contained 16 statements about full-day kindergarten to which the teachers could agree, disagree, or indicate that they were undecided about the statements.

Table VII contains the results of the Teacher Opinionnaire. The table reports the yes, no, and undecided marks and percentages of those marks for the teachers from grade one, grade two, and grade three and the total for all three grades.

Sixty-eight percent of the primary teachers indicated that it would be beneficial for all students to have a full-day kindergarten experience. Sixteen percent did not agree, and 16 percent were undecided.

Sixty percent of the primary teachers agreed that the students who attended full-day kindergarten had better work habits than did children who attended half-day kindergarten. Twenty percent did not agree; 20 percent were undecided.

The students who attended full-day kindergarten functioned more independently than those who attended half-day kindergarten according to 64 percent of the primary teachers. Sixteen percent disagreed, and 20 percent were undecided.

Most of the primary teachers agreed that children who had

TABLE VII

TEACHER OPINIONS of

FULL-DAY KINDERGARTEN

Statement	Grade 1 Teachers						Grade 2 Teachers						Grade 3 Teachers						Total					
	N	Yes		No		Undecided	N	Yes		No		Undecided	N	Yes		No		Undecided	N	Yes		No		Undecided	
		f	%	f	%	f	%		f	%	f	%	f	%		f	%	f	%		f	%	f	%	f	%
1. It would be beneficial to have all my students enter my classroom having had a full-day kindergarten experience rather than a half-day kindergarten experience.	9	8	89	1	11	0	0	8	4	50	1	13	3	38	8	5	63	2	25	1	13	25	17	68	4	16	4	16
2. The students who attended full-day kindergarten have better work habits than half-day kindergarten students.	9	6	67	1	11	2	22	8	4	50	2	25	2	25	8	5	63	2	25	1	13	25	15	60	5	20	5	20
3. The students who attended full-day kindergarten function more independently than half-day kindergarten students.	9	7	78	1	11	1	11	8	4	50	2	25	2	25	8	5	63	1	13	2	25	25	16	64	4	16	5	20
4. The children who have attended full-day kindergarten have better mastery of skills than those who have attended half-day kindergarten.	9	7	78	0	0	2	22	8	3	38	2	25	3	38	8	5	63	2	25	1	13	25	15	60	4	16	6	24
5. Students who attended full-day kindergarten are more excited about coming to school than half-day kindergarten students.	9	3	33	3	33	3	33	8	1	13	2	25	5	63	8	3	38	2	25	3	39	25	7	28	7	28	11	44
6. Students who attended full-day kindergarten seem to be bored with school.	9	1	11	8	89	0	0	8	1	13	6	75	1	13	8	0	0	7	88	1	13	25	2	8	21	84	2	8
7. Children who attended full-day kindergarten seem to socialize better within their peer group than half-day kindergarten students.	9	4	44	2	22	3	33	8	2	25	2	25	4	50	9	5	56	2	22	2	22	26	11	42	6	23	9	35
8. There are no apparent differ-																												

8. There are no apparent differences in the abilities of children who attended full-day kindergarten versus half-day kindergarten.	9	3	33	4	44	2	22	7	3	43	2	29	2	29	8	3	38	3	38	2	25	24	9	38	9	38	6	25
9. As a result of the full-day kindergarten, the students have been exposed to more in-depth basic skills programs.	9	8	89	0	0	1	11	8	7	88	1	13	0	0	8	6	75	0	0	2	25	25	21	84	1	4	3	12
10. The children who attended full-day kindergarten have a better knowledge of phonics and reading skills than half-day kindergarten students.	9	9	100	0	0	0	0	8	3	38	2	25	3	38	8	5	63	1	13	2	25	25	17	68	3	12	5	20
11. Fine motor skills and handwriting skills are further developed in the child who attended full-day kindergarten than the child who attended half-day kindergarten.	9	8	89	1	11	0	0	8	3	38	2	25	3	38	8	5	63	0	0	3	38	25	16	64	3	12	6	24
12. Children who attended full-day kindergarten seem to have better gross motor coordination than children who attended half-day kindergarten.	9	6	67	1	11	2	22	8	2	25	2	25	4	50	8	4	50	2	25	2	25	25	12	48	5	20	8	32
13. Students who attended full-day kindergarten can follow directions better than students who attended half-day kindergarten.	9	7	78	1	11	1	11	8	3	38	2	25	3	38	8	6	75	0	0	2	25	25	16	64	3	12	6	24
14. The attention span of full-day kindergarten students is longer than the attention span of half-day kindergarten students.	9	6	67	1	11	2	22	8	2	25	2	25	4	50	8	5	63	0	0	3	38	25	13	52	3	12	9	36
15. The full-day kindergarten program gives more time to develop basic listening and language skills.	9	8	89	0	0	1	11	8	8	100	0	0	0	0	8	6	75	0	0	2	25	25	22	88	0	0	3	12
16. A full-day kindergarten experience seems better for five and six-year-olds than a half-day experience.	9	6	67	1	11	2	22	8	4	50	2	25	2	25	8	5	63	1	13	2	25	25	15	60	4	16	6	24

attended full-day kindergarten had a better mastery of skills than those who had attended half-day kindergarten. Sixty percent agreed; 16 percent disagreed; 24 percent were undecided.

Only 28 percent agreed that students who attended full-day kindergarten were more excited about coming to school than were half-day kindergarten students. Twenty-eight percent did not agree, and 44 percent were undecided.

Eighty-four percent of the teachers indicated that children who attended full-day kindergarten were not bored in school. Eight percent said that they were, and eight percent were undecided.

The children who attended full-day kindergarten seemed to socialize better within their peer group than did half-day kindergarten children according to 42 percent of the primary teachers. Twenty-three percent did not agree; 35 percent were undecided.

Thirty-eight percent agreed and 38 percent disagreed that there were no apparent differences in the abilities of children who attended full-day or half-day kindergarten, and 25 percent were undecided. Eighty-four percent of the primary teachers agreed that the full-day kindergarten children were exposed to a more in-depth basic skills program; four percent did not agree; 12 percent were undecided.

Sixty-eight percent of the primary teachers agreed that the children who attended full-day kindergarten had a better knowledge of phonics and reading skills than did those who attended half-day kindergarten. Twelve percent disagreed, and 20 percent were undecided.

A total of 64 percent of the primary teachers agreed that

fine motor skills and handwriting skills were further developed in children who attended full-day kindergarten. Twelve percent disagreed; 24 percent were undecided.

Forty-eight percent of the primary teachers thought that children who attended full-day kindergarten seemed to have better gross motor coordination than did children who attended half-day kindergarten; 20 percent disagreed with this, and 32 percent were undecided.

Students who attended full-day kindergarten followed directions better than those who attended half-day kindergarten according to 64 percent of the primary teachers. Twelve percent disagreed with the statement, and 24 percent were undecided.

Fifty-two percent of the primary teachers agreed that the attention span of full-day kindergarten students was longer than the attention span of half-day kindergarten students. Twelve percent disagreed with the statement, and 36 percent were undecided.

Most of the teachers agreed that the full-day kindergarten program devoted more time to developing basic listening and language skills. Although none of the teachers disagreed with this, 12 percent of them were undecided.

Sixty percent of the teachers agreed that the full-day program was better for five and six-year-old children than was the half-day program; but 16 percent disagreed, and 24 percent were undecided.

Table VIII gives the rank order of marks from the Teacher Opinionnaire supporting full-day kindergarten. A majority of the primary teachers indicated that full-day kindergarten was superior to half-day kindergarten in 12 of the 16 items. There was highest

TABLE VIII

RANK ORDER of MARKS

FROM the TEACHER OPINIONNAIRE

SUPPORTING FULL-DAY KINDERGARTEN

Rank	Statement	% Yes
1	There is more time to develop basic listening and language skills.	88
2	Students are not bored.	84*
3	Students have been exposed to more in-depth skills programs.	84
4	It would be beneficial for all children to have full-day kindergarten.	68
5	Children have a better knowledge of phonics and reading skills.	68
6	Children function more independently.	64
7	Fine motor skills and handwriting skills are further developed.	64
8	Students can follow directions better.	64
9	Children have a better mastery of skills.	62
10	Children have better work habits.	60
11	Full-day kindergarten is better than half-day.	60
12	The students have a longer attention span.	52
13	Children have better gross motor coordination.	48
14	Children socialize better within their peer group.	42
15	There are no apparent differences in abilities of children.	38
16	Children are more excited about coming to school.	28

*A no mark for this item is considered a yes mark in this table.

agreement in the statements that there was more time to develop basic listening and language skills, that students were not bored, and that students had been exposed to more in-depth skills programs. There was least agreement with the statements that full-day kindergarten children socialize better with their peer group, that there were no apparent differences in abilities of children, and that children were more excited about coming to school.

Table IX lists the sums and means of the percentages of marks on the Teacher Opinionnaire. First grade teachers gave the highest percentage of yes marks (68), and the third grade teachers had 57 percent yes marks and the second grade teachers, 43 percent yes marks.

The first grade teachers had the lowest percentage of no marks with 17 percent, and the third grade teachers had 19 percent no marks and the second grade teachers, 25 percent no marks.

Second grade teachers had the highest percent of undecided marks. Thirty-two percent of the second grade teachers, 24 percent of the third grade teachers, and 15 percent of the first grade teachers were undecided.

Overall, the percent in favor of the full-day kindergarten activities by primary teachers was 56. The percent of disagreement with the statements was 20, and the percent of undecided marks was 23.

TABLE IX

RESPONSES to ALL ITEMS

on TEACHER OPINIONNAIRE

Grade Level	Number of Teachers	Total Yes		Total No		Total Undecided	
		f	%	f	%	f	%
1	9	98	68	25	17	22	15
2	8	54	43	32	25	41	32
3	8	73	57	25	19	31	24
All Teachers	25	225	56	82	20	94	23

Teachers were invited to make whatever comments they wished on the Teacher Opinionnaire, and those comments follow.

Comments by Teachers from the Teacher Opinionnaire

Grade 1: *The following have been noted since the advent of all-day kindergarten:*

1. *Increased problems with lack of self-discipline.*
2. *Poor handwriting habits, specifically incorrect letter formation and holding pencil incorrectly.*

(Eight teachers did not write comments.)

Grade 2: *Students that have been enrolled in full-day kindergarten seem more restless and less attentive. Also they seem much more talkative at inappropriate times.*

There is a possibility that we are exposing children to skills too early. We may be pushing children to accomplish tasks before they are physically able. I think there are many parents who are unable to evaluate their child's readiness for school or the value of all-day versus half-day kindergarten for their child. Many parents consider all-day kindergarten for their child because it is more convenient, obviously, than half-day. Others may sincerely feel that more time in kindergarten is better without considering the child's abilities or maturity level at the time of enrollment. I don't think we can say full-day or half-day is best for all children.

My five-year-old is presently enrolled as a full-day kindergarten student at Hebron. He was reluctant to attend as we talked this summer, but what helped was the thought of eating at school and riding the bus both ways with his brother. He has already learned to skip, which I think is due to the fact he has gym. His older brother had a half-day experience. He went in the afternoon and by dinner he was a grouch! I worried that my younger son would drag by the end of the day, but he doesn't even show any signs of tiredness. By going all day, he gives his full attention to skills in the morning, has a short rest during storytime and is ready to go again. I wish my older son could have gone all day because I see a big difference in the two boys, and I believe it has nothing to do with intelligence. I am confident that my younger son will be better prepared for first grade.

Last year all my students had attended all-day kindergarten. This year I only have three that did not attend all-day kindergarten; therefore, I do not have a valid comparison.

(Four teachers did not write comments.)

Grade 3: *Some children have gained more than others.*

I have taught first until this year. I feel we should remember many of these children are not at home. They are with sitters or child-care situations and get no mental stimulation at all.

My opinion is that some children are mature enough to attend all-day kindergarten without frustration--others need to ease into the structural learning situation with the half-day experience. By the time third grade is reached, I believe all-day kindergarten no longer has any effect.

The students that have participated in the all-day kindergarten seem ready for first grade. By the time they reach third, the children appear to be mature third graders.

The students who have attended the all-day program in general tend to be more settled and ready to assume responsibility for assigned tasks. They are more capable of working independently. Their academic skills seemed as a group to be more advanced.

(Three teachers did not write comments.)

Piers-Harris Children's Self-Concept Scale

The Piers-Harris Children's Self-Concept Scale (1) was administered to children in both the experimental and control groups in the fall of 1982 when students from 1978-1979 were in fourth grade and students from 1979-1980 were in third grade. The statistical t-test was performed to determine if there was a significant difference between the means of the scores of the full-day and half-day kindergarten students. The results of the test are summarized in Table X which shows the mean scores for all groups and the results of the t-tests.

TABLE X

PIERS-HARRIS

CHILDREN'S SELF-CONCEPT SCALE

Group	N	Mean	S.D.	t	p
1978-1979					
Full-Day	78	58.99	12.21	1.98	< .05
Half-Day	93	54.81	14.83		
1979-1980					
Full-Day	98	60.48	12.19	1.08	N.S.
Half-Day	93	58.41	14.22		

The 1978-1979 full-day kindergarten children had higher self-concept scores than the half-day kindergarten children with a mean

score of 58.99 compared to a mean score of 54.81 for half-day kindergarten children. The full-day kindergarten children scored significantly higher with the statistical t-test showing $t = 1.98$ and $p < .05$.

The 1979-1980 full-day kindergarten children had higher self-concept scores with a mean score of 60.48 compared to a mean score of 58.41 for half-day kindergarten children. However, the difference was not significantly higher with the statistical t-test showing $t = 1.08$.

Table XI gives the equivalent percentile ranks and stanines for the mean scores of the experimental and control groups. All groups, full-day and half-day, had higher means than the normative sample for the test which had a mean of 51.84.

TABLE XI

PERCENTILE RANKS and STANINES

for PIERS-HARRIS CHILDREN'S

SELF-CONCEPT SCALE

Group	Mean	Percentile Rank	Stanine
1978-1979			
Full-Day	58.99	66	6
Half-Day	54.81	52	5
1979-1980			
Full-Day	60.48	69	6
Half-Day	58.41	63	6

The results of the Piers-Harris Children's Self-Concept Scale show that children who attended full-day kindergarten had higher scores than those who attended half-day kindergarten and that those scores were significantly higher for those children who were in the 1978-1979 group.

Survey of School Attitudes

The Survey of School Attitudes, Intermediate Level, Form A, was given in the fall of 1982 to the experimental and control groups of children who attended kindergarten in 1978-1979. The statistical t-test was performed to determine if there was a significant difference between the full-day and half-day mean scores. The results are summarized in Table XII which shows the mean scores for both groups and the results of the t-tests.

TABLE XII

1982 SCHOOL ATTITUDES AMONG 1978-1979

KINDERGARTEN STUDENTS

Subject	Group	N	Mean	S.D.	t	p
Mathematics	Full-Day Half-Day	77 96	20.35 19.16	7.59 7.48	1.03	N.S.
Reading	Full-Day Half-Day	77 96	21.53 21.24	6.68 6.73	0.28	N.S.
Science	Full-Day Half-Day	77 96	23.36 21.29	5.35 6.05	2.34	< .05
Social Studies	Full-Day Half-Day	77 96	22.70 21.14	6.06 6.50	1.61	N.S.

The mean scores for the full-day kindergarten children were higher than the half-day kindergarten children in all four subject areas, but they were significantly different only in science.

In the fall of 1982, the Survey of School Attitudes, Primary Level, Form A, was given to children in the experimental and control groups who attended kindergarten in 1979-1980. Table XIII gives the mean scores for both groups and the results of the *t*-tests.

TABLE XIII

1982 SCHOOL ATTITUDES AMONG 1979-1980

KINDERGARTEN STUDENTS

Subject	Group	N	Mean	S.D.	*t*	*p*
Mathematics	Full-Day Half-Day	95 87	22.98 23.93	5.49 5.74	1.14	N.S.
Reading	Full-Day Half-Day	95 87	21.20 22.15	6.48 5.95	1.02	N.S.
Science	Full-Day Half-Day	95 87	22.98 23.63	5.47 5.25	0.82	N.S.
Social Studies	Full-Day Half-Day	95 87	21.78 23.76	6.53 5.70	2.16	< .05

In all four subtest areas, the mean scores for children who attended half-day kindergarten in 1979-1980 were higher than those for children who attended full-day kindergarten, and the scores were significantly higher in social studies.

The results from the Survey of School Attitudes suggest that there is no overall difference in school attitudes between the children

who attended full-day kindergarten and those who attended half-day kindergarten. One full-day group scored higher than the half-day group in every subject area, and the other full-day group scored lower than the half-day group in every subject area.

Report Card Grades

Compiled for this report were academic grades on report cards for the first, second, and third grades for the 1978-1979 experimental and control groups and the first and second grade report cards for the 1979-1980 experimental and control groups. [Children in Evansville receive report cards four times each year in the primary grades. The marks that they receive in subject achievement are S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement). The order of these marks from high to low is S, I, N. At the end of each school year, report card grades are recorded on a composite report along with an average of these marks, and these average marks were used to compare the groups in this study.]

The chi-square test of independence was used to evaluate whether grades and group membership were independent factors. The results of the test are summarized in Tables XIV, XV, XVI, XVII, and XVIII.

Table XIV shows the first grade report card results for the 1978-1979 experimental and control groups.

TABLE XIV

FIRST GRADE ACADEMIC MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Subject	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Mathematics	Full-Day	79	72	91	4	5	3	4	8.03	< .05
	Half-Day	103	78	76	9	9	16	16		
Reading	Full-Day	79	63	80	7	9	9	11	10.48	< .01
	Half-Day	103	61	59	10	10	32	31		
Handwriting	Full-Day	79	54	68	12	15	13	16	0.43	N.S.
	Half-Day	103	66	64	19	18	18	17		

The full-day group received a higher percentage of S marks in mathematics, reading, and handwriting. The two less-than-satisfactory marks, I and N, were given in a larger percentage in all subject areas to the half-day group.

The chi-square test of independence revealed that the grade assigned and membership in the experimental and control groups were not independent in mathematics and reading. Even though the handwriting marks were higher in the experimental group, they were not significantly related to group membership.

Table XV contains the academic grades on report cards for the 1978-1979 experimental and control groups in second grade.

TABLE XV

SECOND GRADE ACADEMIC MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Subject	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Mathematics	Full-Day	76	69	91	3	4	4	5	26.84	< .01
	Half-Day	97	53	55	16	16	28	29		
Reading	Full-Day	76	67	88	4	5	5	7	16.76	< .01
	Half-Day	97	60	62	7	7	30	31		
Hand-writing	Full-Day	76	56	74	5	7	15	20	3.80	N.S.
	Half-Day	97	58	60	8	8	31	32		
Spelling	Full-Day	76	70	92	2	3	4	5	16.67	< .01
	Half-Day	97	64	66	12	12	21	22		

The results show that the two groups continued the pattern as in Table XIV. The full-day kindergarten children received a higher percentage of S marks in mathematics, reading, handwriting, and spelling, the last of which was added to the report card marks in second grade. The half-day kindergarten children received a higher percentage of less-than-satisfactory marks, I and N, in all four subject areas.

The chi-square test of independence revealed that the grade assigned and membership in the experimental and control groups were not independent in mathematics, reading, and spelling. The handwriting marks were higher for the experimental group, but they were not significantly related to group membership.

Table XVI contains the academic grades on report cards for the 1978-1979 experimental and control groups in third grade.

TABLE XVI

THIRD GRADE ACADEMIC MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Subject	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Mathematics	Full-Day	74	61	82	7	9	6	8	8.96	< .05
	Half-Day	92	57	62	14	15	21	23		
Reading	Full-Day	74	62	84	3	4	9	12	1.36	N.S.
	Half-Day	92	71	77	7	8	14	15		
Hand-writing	Full-Day	74	57	77	9	12	8	11	4.39	N.S.
	Half-Day	92	59	64	12	13	21	23		
Spelling	Full-Day	74	66	89	2	3	6	8	2.40	N.S.
	Half-Day	92	74	80	4	4	14	15		
English	Full-Day	74	66	89	1	1	7	9	11.51	< .01
	Half-Day	92	62	67	8	9	22	24		
Social Studies	Full-Day	74	68	92	2	3	4	5	5.24	N.S.
	Half-Day	92	91	99	0	0	1	1		
Science	Full-Day	74	67	91	3	4	4	5	0.56	N.S.
	Half-Day	92	86	93	3	3	3	3		
Art	Full-Day	74	73	99	0	0	1	1	1.25	N.S.
	Half-Day	92	92	100	0	0	0	0		
Music	Full-Day	74	74	100	0	0	0	0	2.46	N.S.
	Half-Day	92	89	97	2	2	1	1		

The table shows that children in the experimental group had a higher percentage of S marks in six subject areas--mathematics, reading, handwriting, spelling, English, and music. The control group had a higher percentage of S marks in social studies, science, and art.

The children who attended half-day kindergarten received a larger percentage of less-than-satisfactory marks, I and N, in 12 cases, and the

full-day group received a larger percentage of less-than-satisfactory marks in five cases. Neither group had a student who received an I mark in art.

The chi-square test of independence revealed that the grade assigned and membership in the experimental and control groups were not independent in mathematics and English. The other seven subject grades were not significantly related to group membership.

Table XVII lists the academic grades on report cards for the 1979-1980 experimental and control groups in first grade.

TABLE XVII

FIRST GRADE ACADEMIC MARKS

for 1979-1980 KINDERGARTEN STUDENTS

Subject	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Mathematics	Full-Day	114	94	82	13	11	7	6	3.55	N.S.
	Half-Day	112	81	72	18	16	13	12		
Reading	Full-Day	114	77	68	20	18	17	15	0.18	N.S.
	Half-Day	112	74	66	19	17	19	17		
Handwriting	Full-Day	114	72	63	25	22	17	15	5.18	N.S.
	Half-Day	112	54	48	33	29	25	22		

The full-day kindergarten children received a higher percentage of satisfactory marks than the half-day kindergarten children in mathematics, reading, and handwriting. They also received a lower percentage of less-than-satisfactory marks, I and N, in all subjects except I in reading. Even though the children in the full-day kindergarten received

higher grades in mathematics, reading, and handwriting, these grades were not significantly associated with group membership.

Table XVIII shows the academic grades on report cards for the 1979-1980 experimental and control groups in second grade.

TABLE XVIII

SECOND GRADE ACADEMIC MARKS

for 1979-1980 KINDERGARTEN STUDENTS

Subject	Group	N	Satisfactory		Improving		Needs Improvement		Chi Square	p
			f	%	f	%	f	%		
Mathematics	Full-Day	110	94	85	12	11	4	4	20.22	< .01
	Half-Day	102	65	64	12	12	25	25		
Reading	Full-Day	110	91	83	12	11	7	6	14.79	< .01
	Half-Day	102	68	67	8	8	26	25		
Hand-writing	Full-Day	110	76	69	22	20	12	11	6.40	< .05
	Half-Day	102	54	53	27	26	21	21		
Spelling	Full-Day	110	101	92	8	7	1	1	14.66	< .01
	Half-Day	102	79	77	8	8	15	15		

The full-day kindergarten children received a higher percentage of satisfactory marks in all four subject areas--mathematics, reading, handwriting, and spelling. They also received a lower percentage of less-than-satisfactory marks, I and N, in all subject areas except I in reading.

The chi-square test of independence revealed that there was a significant association between the grade assigned and membership in the experimental and control group in every subject area--mathematics, reading, handwriting, and spelling.

The 1978-1979 and 1979-1980 experimental and control groups were compared in academic grades 23 times in Tables XIV through XVIII. The experimental groups consistently had higher percentages of satisfactory marks and lower percentages of less-than-satisfactory marks. The chi-square test of independence revealed that the association between grade assigned and membership in the experimental and control group was significant in 11 of the 23 times that they were compared. Those subject areas in which the probability was less than .05 that the observed association could be attributed to chance were mathematics, four times; reading, three times; spelling, two times; and English and handwriting, one time each.

Report Card Conduct Marks

The conduct marks on report cards for the first, second, and third grades for the 1978-1979 experimental and control groups and the first and second grade report card conduct marks for the 1979-1980 experimental and control groups are presented in this section.

Children in Evansville receive report card marks four times each year in 12 conduct areas. The marks for those 12 areas are S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement). The order of these marks from high to low is S, I, N. At the end of each school year, report card conduct marks are recorded on a composite report along with an average of these marks, and these averages were used to compare the groups in this study.

The chi-square test of independence was used to evaluate whether conduct marks and group membership were independent factors. The results

of the test are summarized in Tables XIX, XX, XXI, XXII, XXIII and XXIV.

Table XIX shows the first grade report card conduct mark results for the 1978-1979 experimental and control groups.

TABLE XIX

FIRST GRADE CONDUCT MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Conduct Area	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Respects Authority	Full-Day	79	69	87	5	6	5	6	1.48	N.S.
	Half-Day	103	95	92	3	3	5	5		
Shows Self-Confidence	Full-Day	79	70	89	5	6	4	5	3.69	N.S.
	Half-Day	103	80	78	13	13	10	10		
Uses Self-Control	Full-Day	79	53	67	11	14	15	19	2.54	N.S.
	Half-Day	103	77	75	15	15	11	11		
Follows Directions	Full-Day	79	63	80	10	13	6	8	1.95	N.S.
	Half-Day	103	86	83	7	7	10	10		
Works Independently	Full-Day	79	53	67	12	15	14	8	2.07	N.S.
	Half-Day	103	79	77	11	11	13	13		
Uses Time Wisely	Full-Day	79	54	68	15	19	10	13	1.91	N.S.
	Half-Day	103	77	75	12	12	14	14		
Uses Materials Wisely	Full-Day	79	76	96	2	3	1	1	4.37	N.S.
	Half-Day	103	91	88	4	4	8	8		
Puts Forth Best Effort	Full-Day	79	66	84	3	4	10	13	8.67	< .05
	Half-Day	103	69	67	17	17	17	17		
Works Well With Others	Full-Day	79	70	89	2	3	7	9	5.34	N.S.
	Half-Day	103	84	82	12	12	7	7		
Listens Attentively	Full-Day	79	64	81	8	10	7	9	0.64	N.S.
	Half-Day	103	88	85	8	8	7	7		
Obeys Playground Rules	Full-Day	79	74	94	0	0	5	6	6.13	< .05
	Half-Day	103	87	84	7	7	9	9		
Respects Property of Others	Full-Day	79	76	96	2	3	1	1	6.60	< .05
	Half-Day	103	87	84	10	10	6	6		

The results show that the full-day kindergarten children had a higher percentage of satisfactory marks in first grade in the following six conduct areas: shows self-confidence, uses materials wisely, puts forth best effort, works well with others, obeys playground rules, and respects property of others. The half-day kindergarten children had a higher percentage of satisfactory conduct marks in the other six conduct areas: respects authority, uses self-control, follows directions, works independently, uses time wisely, and listens attentively.

For the 24 less-than-satisfactory conduct marks, the full-day kindergarten children received a lower percentage of I (Improvement Shown) and N (Needs Improvement) conduct marks in 15 conduct areas, and the children who attended half-day kindergarten received a lower percentage of less-than-satisfactory conduct marks in nine areas.

The chi-square test of independence revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in three conduct areas in which the full-day kindergarten children received higher conduct marks. These areas were puts forth best effort, obeys playground rules, and respects property of others.

Table XX contains the second grade report card conduct marks for the 1978-1979 experimental and control groups.

TABLE XX

SECOND GRADE CONDUCT MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Conduct Area	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	p
			f	%	f	%	f	%		
Respects Authority	Full-Day	76	76	100	0	0	0	0	4.03	N.S.
	Half-Day	97	92	95	3	3	2	2		
Shows Self-Confidence	Full-Day	76	75	99	1	1	0	0	22.28	< .01
	Half-Day	97	70	72	11	11	16	16		
Uses Self-Control	Full-Day	76	52	68	7	9	17	22	1.48	N.S.
	Half-Day	97	58	60	13	13	26	27		
Follows Directions	Full-Day	76	72	95	1	1	3	4	11.09	< .01
	Half-Day	97	74	76	8	8	15	15		
Works Independently	Full-Day	76	71	93	1	1	4	5	13.77	< .01
	Half-Day	97	69	71	4	4	24	25		
Uses Time Wisely	Full-Day	76	60	79	5	7	11	14	13.92	< .01
	Half-Day	97	50	52	17	18	30	31		
Uses Materials Wisely	Full-Day	76	72	95	1	1	3	4	0.86	N.S.
	Half-Day	97	89	92	1	1	7	7		
Puts Forth Best Effort	Full-Day	76	66	87	1	1	9	12	8.00	< .05
	Half-Day	97	69	71	10	10	18	19		
Works Well With Others	Full-Day	76	72	95	2	3	2	3	1.80	N.S.
	Half-Day	97	90	93	1	1	6	6		
Listens Attentively	Full-Day	76	67	88	8	11	1	1	4.27	N.S.
	Half-Day	97	78	80	11	11	8	8		
Obeys Playground Rules	Full-Day	76	73	96	1	1	2	3	10.99	< .01
	Half-Day	97	77	79	14	14	6	6		
Respects Property of Others	Full-Day	76	76	100	0	0	0	0	8.32	< .05
	Half-Day	97	87	90	5	5	5	5		

The results show that in all 12 conduct areas the children who attended full-day kindergarten received a larger percentage of satisfactory conduct marks in second grade than did children who attended half-day kindergarten. The full-day kindergarten children also had a lower percentage of less-than-satisfactory conduct marks in 21 of the 24 conduct areas that were rated I (Improvement Shown) or N (Needs Improvement).

The chi-square test of independence revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in seven conduct areas in which the full-day kindergarten children received higher conduct marks. These areas were shows self-confidence, follows directions, works independently, uses time wisely, puts forth best effort, obeys playround rules, and respects property of others.

Table XXI shows the third grade report card conduct marks for the 1978-1979 experimental and control groups.

TABLE XXI

THIRD GRADE CONDUCT MARKS

for 1978-1979 KINDERGARTEN STUDENTS

Conduct Area	Group	N	Satisfactory		Improving		Needs Improvement		Chi Square	t
			f	%	f	%	f	%		
Respects Authority	Full-Day	74	73	99	1	1	0	0	4.01	N.S.
	Half-Day	92	85	92	3	3	4	4		
Shows Self-Confidence	Full-Day	74	73	99	1	1	0	0	13.62	< .01
	Half-Day	92	74	80	9	10	9	10		
Uses Self-Control	Full-Day	74	51	69	14	19	9	12	3.98	N.S.
	Half-Day	92	60	65	11	12	21	23		
Follows Directions	Full-Day	74	70	95	2	3	2	3	14.74	< .01
	Half-Day	92	66	72	8	9	18	20		
Works Independently	Full-Day	74	69	93	1	1	4	5	3.96	N.S.
	Half-Day	92	78	85	7	8	7	8		
Uses Time Wisely	Full-Day	74	62	84	4	5	8	11	6.20	< .05
	Half-Day	92	62	67	7	8	23	25		
Uses Materials Wisely	Full-Day	74	71	96	3	4	0	0	5.55	N.S.
	Half-Day	92	86	93	1	1	5	5		
Puts Forth Best Effort	Full-Day	74	68	92	0	0	6	8	12.49	< .01
	Half-Day	92	66	72	9	10	17	18		
Works Well With Others	Full-Day	74	69	93	0	0	5	7	5.31	N.S.
	Half-Day	92	89	97	2	2	1	1		
Listens Attentively	Full-Day	74	71	96	1	1	2	3	4.09	N.S.
	Half-Day	92	80	87	3	3	9	10		
Obeys Playground Rules	Full-Day	74	74	100	0	0	0	0	8.56	< .05
	Half-Day	92	82	89	8	9	2	2		
Respects Property of Others	Full-Day	74	74	100	0	0	0	0	4.15	N.S.
	Half-Day	92	87	95	2	2	3	3		

The third grade conduct marks on report cards for children who attended full-day kindergarten in 1978-1979 continued to be higher than for children who attended half-day kindergarten. The results show that the experimental group children had a higher percentage of satisfactory marks than the control group children in 11 of the 12 areas with the control group receiving higher conduct marks only in the area of works well with others. The experimental group had a lower percentage of less-than-satisfactory conduct marks in 21 of the 24 conduct areas that were rated I (Improvement Shown) or N (Needs Improvement).

The chi-square test of independence revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in five conduct areas in which the full-day kindergarten children received higher conduct marks. These areas were shows self-confidence, follows directions, uses time wisely, puts forth best effort, and obeys playground rules.

Table XXII shows the first grade report card conduct marks for the 1979-1980 experimental and control groups.

TABLE XXII

FIRST GRADE CONDUCT MARKS

for 1979-1980 KINDERGARTEN STUDENTS

Conduct Area	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	t
			f	%	f	%	f	%		
Respects Authority	Full-Day	114	101	89	6	5	7	6	1.24	N.S.
	Half-Day	112	104	93	4	4	4	4		
Shows Self-Confidence	Full-Day	114	107	94	4	4	3	3	15.54	< .01
	Half-Day	112	84	75	19	17	9	8		
Uses Self-Control	Full-Day	114	60	53	28	25	26	23	9.91	< .01
	Half-Day	112	75	67	28	25	9	8		
Follows Directions	Full-Day	114	98	86	12	11	4	4	2.08	N.S.
	Half-Day	112	89	79	15	13	8	7		
Works Independently	Full-Day	114	89	78	12	11	13	11	0.46	N.S.
	Half-Day	112	84	75	15	13	13	12		
Uses Time Wisely	Full-Day	114	76	67	24	21	14	12	0.07	N.S.
	Half-Day	112	74	66	25	22	13	12		
Uses Materials Wisely	Full-Day	114	109	96	3	3	2	2	4.13	N.S.
	Half-Day	112	99	88	9	8	4	4		
Puts Forth Best Effort	Full-Day	114	86	75	17	15	11	10	4.43	N.S.
	Half-Day	112	70	63	25	22	17	15		
Works Well With Others	Full-Day	114	104	91	4	4	6	5	6.07	< .05
	Half-Day	112	96	86	13	12	3	3		
Listens Attentively	Full-Day	114	95	83	11	10	8	7	0.68	N.S.
	Half-Day	112	92	82	14	13	6	5		
Obeys Playground Rules	Full-Day	114	109	96	4	4	1	1	10.47	< .01
	Half-Day	112	92	82	17	15	3	3		
Respects Property of Others	Full-Day	114	111	97	2	2	1	1	8.96	< .05
	Half-Day	112	97	87	11	10	4	4		

The results show that the children who attended full-day kindergarten received a higher percentage of satisfactory conduct marks in first grade in ten of the 12 conduct areas. They also received a lower percentage of less-than-satisfactory conduct marks in 17 of the 24 conduct areas that were rated I (Improvement Shown) or N (Needs Improvement).

The chi-square test of independence revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in four conduct areas in which the full-day kindergarten children received higher conduct marks. These areas were shows self-confidence, works well with others, obeys playground rules, and respects property of others. The chi-square test of independence also revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in one area, uses self-control, in which the half-day kindergarten children received higher conduct marks.

Table XXIII shows the second grade report card conduct marks for the 1979-1980 experimental and control groups.

TABLE XXIII

SECOND GRADE CONDUCT MARKS

for 1979-1980 KINDERGARTEN STUDENTS

Conduct Area	Group	N	Satisfactory		Improving		Needs Improvement		Chi-Square	t
			f	%	f	%	f	%		
Respects Authority	Full-Day	110	103	94	3	3	4	4	1.62	N.S.
	Half-Day	102	98	96	3	3	1	1		
Shows Self-Confidence	Full-Day	110	109	99	0	0	1	1	9.70	< .01
	Half-Day	102	91	89	1	1	10	10		
Uses Self-Control	Full-Day	110	67	61	14	13	29	26	0.38	N.S.
	Half-Day	102	58	57	15	15	29	28		
Follows Directions	Full-Day	110	98	89	6	5	6	5	2.70	N.S.
	Half-Day	102	83	81	8	8	11	11		
Works Independently	Full-Day	110	97	88	8	7	5	5	21.53	< .01
	Half-Day	102	63	62	15	15	24	24		
Uses Time Wisely	Full-Day	110	72	65	12	11	26	24	7.42	< .05
	Half-Day	102	48	47	19	19	35	34		
Uses Materials Wisely	Full-Day	110	102	93	2	2	6	5	3.12	N.S.
	Half-Day	102	93	91	6	6	3	3		
Puts Forth Best Effort	Full-Day	110	78	71	8	7	24	22	5.25	N.S.
	Half-Day	102	58	57	15	15	29	28		
Works Well With Others	Full-Day	110	100	91	5	5	5	5	3.26	N.S.
	Half-Day	102	85	83	11	11	6	6		
Listens Attentively	Full-Day	110	92	84	11	10	7	6	18.57	< .01
	Half-Day	102	58	57	30	29	14	14		
Obeys Playground Rules	Full-Day	110	109	99	0	0	1	1	49.88	< .01
	Half-Day	102	62	61	20	20	20	20		
Respects Property of Others	Full-Day	110	108	98	1	1	1	1	27.44	< .01
	Half-Day	102	75	74	21	21	6	6		

The table shows that the children who attended full-day kindergarten received a higher percentage of satisfactory conduct marks in second grade in 11 of the 12 conduct areas. They also received a lower percentage of less-than-satisfactory conduct marks in 21 of the 24 conduct areas that were rated I (Improvement Shown) or N (Needs Improvement).

The chi-square test of independence revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated in six conduct areas in which the full-day kindergarten children received higher conduct marks. These areas were shows self-confidence, works independently, uses time wisely, listens attentively, obeys playground rules, and respects property of others.

Table XXIV summarizes the five preceding tables of first, second, and third grade conduct marks for the 1978-1979 kindergarten students and the first and second grade conduct marks for the 1979-1980 kindergarten students. It also lists the number of times that the full-day kindergarten students had higher percentages than the half-day kindergarten students.

TABLE XXIV

SUMMARY of HIGHER PERCENTS of CONDUCT MARKS

and CASES in WHICH FAVORABLE MARKS and GROUP MEMBERSHIP

WERE SIGNIFICANTLY ASSOCIATED from TABLES XIX to XXIII

Conduct Area	Group	Higher Percents			Significant Association Between Favorable Marks and Group Membership
		Satis-factory	Im-proving	Needs Im-provement	
Respects Authority	Full-Day	2	2	3	0
	Half-Day	3	2	2	0
Shows Self-Confidence	Full-Day	5	0	0	4
	Half-Day	0	5	5	0
Uses Self-Control	Full-Day	3	1	2	0
	Half-Day	2	3	3	1
Follows Directions	Full-Day	4	1	0	2
	Half-Day	1	4	5	0
Works Inde-pendently	Full-Day	4	1	0	2
	Half-Day	1	4	5	0
Uses Time Wisely	Full-Day	4	1	0	3
	Half-Day	1	4	4	0
Uses Materi-als Wisely	Full-Day	5	1	1	0
	Half-Day	0	3	4	0
Puts Forth Best Effort	Full-Day	5	0	0	3
	Half-Day	0	5	5	0
Works Well With Others	Full-Day	4	1	3	1
	Half-Day	1	4	2	0
Listens Attentively	Full-Day	4	1	2	1
	Half-Day	1	3	3	0
Obeys Play-ground Rules	Full-Day	5	0	0	5
	Half-Day	0	5	5	0
Respects Property of Others	Full-Day	5	0	0	4
	Half-Day	0	5	5	0
Total	Full-Day	50	9	11	25
	Half-Day	10	47	48	1

The results show that children who attended full-day kindergarten received a higher percentage of satisfactory conduct marks 50 times out of a possible total of 60. The full-day kindergarten children received less-than-satisfactory conduct marks 20 times out of a possible total of 120. There were five instances in which the less-than-satisfactory conduct marks were the same.

The chi-square test of independence was utilized five times for each of the 12 conduct areas. The test revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated 25 times out of 60 in which the full-day kindergarten children received higher conduct marks and in one area (uses self-control) in which the half-day kindergarten children received higher conduct marks. The full-day kindergarten group received significantly favorable conduct marks for these areas: obeys playground rules (5), shows self-confidence (4), respects property of others (4), uses time wisely (3), puts forth best effort (3), follows directions (2), works well with others (1), and listens attentively (1).

Retention

Children enrolled in kindergarten in the four experimental and four control schools in June 1979 and June 1980 were compared to the grade levels of children from those lists who were still in the same school in June 1982 to identify those promoted to a higher grade and those retained in the same grade for another year. The retention information refers only to those children who were still enrolled in the same school in June 1982 and does not involve children in the 1978-1979 or 1979-1980 kindergarten groups who moved to other schools.

Table XXV shows the rate of retention for the 1978-1979 and 1979-1980 experimental and control groups.

TABLE XXV

RATE of RETENTION for

1978-1979 and 1979-1980 KINDERGARTEN STUDENTS

Group	N	Not Retained		Retained		Chi-Square	p
		f	%	f	%		
1978-1979							
Full-Day	81	74	91	7	9	4.28	< .01
Half-Day	108	87	81	21	19		
1979-1980							
Full-Day	115	110	96	5	4	9.26	< .01
Half-Day	114	95	83	19	17		

The results show that a high percentage of children were retained from the group of children who attended half-day kindergarten. Nineteen percent of the children who attended half-day kindergarten in 1978-1979 were retained at the end of kindergarten, grade one, grade two, or grade three; and nine percent of the children who attended full-day kindergarten were retained. Seventeen percent of the children who attended half-day kindergarten in 1979-1980 were retained at the end of kindergarten, grade one, or grade two; and four percent of the children who attended full-day kindergarten were retained.

The chi-square test of independence revealed that the probability was less than one in 100 that the observed findings could have occurred by chance and that the rate of retention and membership in the experimental and control groups had a significant association.

Handwriting Evaluation Scale — Cursive

In the fall of 1982, a handwriting test was given to the 1978-1979 and 1979-1980 experimental and control groups. The Evaluation Scale--Cursive for grade three was used with the 1979-1980 group, and the Evaluation Scale--Cursive for grade four was used with the 1978-1979 group. Five areas were rated on the test. These were letter formation, slant, spacing, alignment and proportion, and line quality. The handwriting tests were rated 1, excellent; 2, good; 3, average; 4, fair; and 5, poor.

Table XXVI shows the ratings, mean scores, and results of the t-tests for the experimental and control groups.

TABLE XXVI

1982 HANDWRITING EVALUATION SCALE — CURSIVE

SCORES for 1978-1979 and 1979-1980

KINDERGARTEN STUDENTS

Group	N	Rating					Mean	S.D.	t	p
		1	2	3	4	5				
1978-1979										
Full-Day	74	2	10	26	29	7	3.39	.93	1.08	N.S.
Half-Day	89	2	15	39	26	7	3.24	.90		
1979-1980										
Full-Day	98	2	9	37	41	9	3.47	.86	2.08	< .05
Half-Day	77	1	17	28	28	3	3.19	.87		

The groups who attended half-day kindergarten in both 1978-1979 and 1979-1980 had lower mean scores. Because the rating of 1 was high and 5, low, a lower mean score indicated that the half-day kindergarten

children performed better on the Evaluation Scale--Cursive than did the children who attended full-day kindergarten. The 1979-1980 control group scored significantly better than the experimental group with a statistical t-test showing $t = 2.08$ and $p = < .05$.

Gates-MacGinitie Reading Tests

The Gates-MacGinitie Reading Tests were administered to children in the spring of 1982 when the 1978-1979 group was in the third grade and the 1979-1980 group was in the second grade. The statistical t-test was performed to determine whether there was a significant difference between the means of the full-day and half-day kindergarten group scores. The data from the tests are summarized in Table XXVII which shows the mean scores for both groups in vocabulary and comprehension and the results of the t-tests.

TABLE XXVII

1982 GATES-MacGINITIE READING TESTS

SCORES for 1978-1979 and 1979-1980

KINDERGARTEN STUDENTS

Area	Group	N	Mean	S.D.	t	p
1978-1979						
Vocabulary	Full-Day	74	40.34	6.03	2.35	< .05
	Half-Day	90	37.67	8.02		
Comprehension	Full-Day	74	35.47	8.20	2.14	< .05
	Half-Day	90	32.60	8.71		
1979-1980						
Vocabulary	Full-Day	109	36.98	6.99	1.79	< .05
	Half-Day	100	34.93	9.43		
Comprehension	Full-Day	109	25.30	6.18	1.84	< .05
	Half-Day	100	23.48	8.05		

The results of the Gates-MacGinitie Reading Tests show that the children who attended full-day kindergarten in 1978-1979 and 1979-1980 had higher mean scores in vocabulary and comprehension. For both the 1978-1979 and 1979-1980 groups, the results of the t-test show that the vocabulary and comprehension scores were significantly higher for the children who had attended full-day kindergarten.

Comprehensive Tests of Basic Skills

In the spring of 1982, the Comprehensive Tests of Basic Skills were administered to children in the 1978-1979 experimental and control groups. The statistical t-test was performed to determine whether there was a significant difference between the means of the full-day and half-day

kindergarten group scores. The data from the tests are summarized in Table XXVIII which shows the mean scores for both groups in 14 areas and the results of the *t*-tests.

TABLE XXVIII

1982 SCORES on

COMPREHENSIVE TESTS of BASIC SKILLS

for the 1978-1979 KINDERGARTEN STUDENTS

Area	Group	N	Mean	S.D.	t	p
Word Attack	Full-Day	74	648.61	45.25	3.04	< .01
	Half-Day	91	622.96	59.49		
Vocabulary	Full-Day	74	636.03	42.03	2.17	< .05
	Half-Day	91	618.65	57.06		
Comprehension	Full-Day	74	645.27	51.61	2.89	< .01
	Half-Day	91	618.97	62.45		
Total Reading	Full-Day	74	640.89	44.32	2.70	< .01
	Half-Day	91	619.00	56.50		
Total Spelling	Full-Day	74	615.61	46.04	1.53	N.S.
	Half-Day	91	603.99	48.17		
Mechanics	Full-Day	74	649.80	32.89	2.57	< .01
	Half-Day	91	633.93	43.65		
Expression	Full-Day	74	658.19	69.75	1.61	N.S.
	Half-Day	91	639.25	78.52		
Total Language	Full-Day	74	654.23	40.68	2.29	< .05
	Half-Day	91	636.82	53.68		
Computation	Full-Day	74	672.76	34.25	2.57	< .01
	Half-Day	91	657.10	41.89		
Conclusions, Applications	Full-Day	74	647.70	39.65	2.80	< .01
	Half-Day	91	629.47	42.77		
Total Mathematics	Full-Day	74	660.43	32.99	2.94	< .01
	Half-Day	91	643.52	39.24		
Total Battery	Full-Day	74	651.84	32.02	2.99	< .01
	Half-Day	91	633.07	45.22		
Science	Full-Day	74	609.81	39.15	0.76	N.S.
	Half-Day	91	604.09	55.14		
Social Studies	Full-Day	74	645.77	37.82	0.68	N.S.
	Half-Day	91	640.89	51.27		

The results of the Comprehensive Tests of Basic Skills show that in all 14 areas of the test the children who attended full-day kindergarten in 1978-1979 had higher mean scores than the children who attended half-day kindergarten. The statistical t-test shows that the mean scores of children in the full-day kindergartens were significantly higher in the following areas: word attack, vocabulary, comprehension, total reading, mechanics, total language, computation, conclusions and applications, total mathematics, and total battery.

References

1. Piers, Ellen V. Manual for the Piers-Harris Children's Self-Concept Scale. Nashville: Counselor Recordings and Tests, 1969.

2. "Play." Practical Application of Research, Newsletter of Phi Delta Kappa, December, 1982, pp. 1-4.

CHAPTER IV

SUMMARY, CONCLUSIONS, and RECOMMENDATIONS

Summary

The Evansville-Vanderburgh School Corporation began full-day, every-day kindergarten in four schools in the 1978-1979 school year and continued the program in 1979-1980. The children in these four schools were compared with a control group from four other schools that had half-day kindergarten. An evaluation of the first two years of full-day kindergarten was published in a report entitled A Study of the Effectiveness of Full-Day Kindergarten.

The 1980 study indicated that the full-day kindergarten children scored significantly higher than the half-day kindergarten children in most of the readiness test areas of the California Achievement Tests, scored significantly higher than anticipated on the Boehm Tests of Basic Concepts, scored significantly higher on the Gates-MacGinitie Reading Tests in first grade, had parents who were supportive of the program, and had first grade teachers who were undecided about the merits of full-day kindergarten.

Reasons for Full-Day Kindergarten

When five new schools were recommended for the full-day program in the spring of 1982, the following reasons were given to support the need for full-day kindergarten.

1. The results of the 1980 study indicated that children did better in their readiness tests, had higher than anticipated scores in basic concepts, and continued to do better in reading at the end of the first grade.

2. Parents rated the program very high and preferred a full-day program when given a choice. (In the fall of 1982, 22 teachers and 22.5 assistants were working with 700 kindergarten children in 11 schools that provided a full-day kindergarten program. Of these 700 children, parents of 691 children had opted for the full-day program, and only nine were enrolled in a half-day program in these same schools.)

3. Teachers have more time to provide opportunities for learning at an appropriate level for each child.

4. Over half of the children in the United States receive some type of pre-kindergarten experience, and much of this experience is for a full day.

5. Space is available in schools, and teachers are available.

6. Children have more opportunities to become a part of the school because they can use facilities such as the gymnasium, cafeteria, auditorium, and library more frequently.

7. Children are attracted to the school system by the full-day kindergarten program. This is beneficial because money is provided by the state for every child enrolled in school. (For example, in 1982 the school system received $928.98 per child enrolled in grades one to 12.)

Concerns About Full-Day Kindergarten

At the same time, it was recognized that there were concerns about adding full-day kindergartens. The concerns were summarized as follows:

1. The cost is high. Teachers and assistants should not be added at a time when schools are in economic decline.

2. The full-day program is another example of government taking over tasks from parents rather than parents taking the responsibility to help provide an enriched background for their children prior to first grade.

3. The full-day program puts too much pressure on five-year-old children, and there is no evidence that all the money and effort can result in better success in school.

Experimental and Control Groups

Four schools began full-day kindergarten in the 1978-1979 school year. The children enrolled in 1978-1979 and 1979-1980 were all included in the original experimental group. There were 187 kindergarten children enrolled in the four experimental schools in June 1979 and 223 enrolled in the same four experimental schools in June 1980. In this study, only those children still enrolled in the same school in grades three and four were included. Of the original 187 students in the 1978-1979 group, 81 were still enrolled in the same school. In the 1979-1980 group, 115 children out of the 223 remained in the same school.

The original control group was composed of half-day kindergarten students from four schools selected to match the socio-economic levels of the four experimental schools. There were 223 half-day kindergarten students enrolled in June 1979 and 203 students enrolled in June 1980 in these four schools. As with the experimental group, only those children still enrolled in the same school in grades three and four were included in the control group for this study. Of the original 223 students attending in 1978-1979, 108 were still enrolled in the same school; of the original 203 students in the 1979-1980 group, 114 remained in the same school.

Purpose of the Study

The purpose of the study was to follow up children who completed full-day, every-day kindergarten in 1979 and 1980 to determine whether the students exhibited any long-term benefits. Data were collected from

standardized tests, report cards, questionnaires, and interviews to test the null hypothesis that there was no difference in children who attended the full-day and half-day programs. Thus, the study was based on the expectation that children who attended the 1978-1979 and 1979-1980 full-day, every-day kindergarten would

1. Have positive attitudes about full-day kindergarten.
2. Have parents with positive attitudes about full-day kindergarten.
3. Have first, second, and third grade teachers with positive attitudes about full-day kindergarten.

Further, when compared with students who attended half-day kindergarten in 1978-1979 and 1979-1980, the children who attended the full-day kindergartens would

4. Display a higher self-concept, as measured by the Piers-Harris Children's Self-Concept Scale.
5. Have more positive attitudes toward school, as measured by the Survey of School Attitudes.
6. Achieve higher academic report card grades.
7. Achieve higher conduct marks on report cards.
8. Have a lower rate of being retained in a grade.
9. Achieve higher handwriting ratings, as measured by the Evaluation Scale--Cursive.
10. Achieve higher reading scores, as measured by the Gates-MacGinitie Reading Tests.
11. Achieve higher academic scores, as measured by the Comprehensive Tests of Basic Skills.

Results

The attitudes of children who completed full-day kindergarten in 1978-1979 and 1979-1980 were obtained from a ten-item Student

Questionnaire that was administered in the fall of 1982. Nine of the items called for yes and no responses; the tenth item asked the question, "What do you remember most about your year in kindergarten?"

The third and fourth grade children were consistent in their answers to the questions. At least 85 percent of the children replied that they felt more grown up when they got to go to school all day; liked eating in the school cafeteria; were glad to go to school full day so that they could spend more time using the blocks, paints, and playhouse; found it easier to learn how to read and learn mathematics in first grade; liked having more music and art; and were glad that they went to full-day kindergarten.

Eleven percent of the third grade children and 23 percent of the fourth grade children indicated that it bothered them to be away from their mothers or sitters when they went to full-day kindergarten. Thirty-five percent of the third grade children and 43 percent of the fourth grade children indicated that they were frightened when they went to first grade. When asked what they remembered most about their year in kindergarten, the most frequent responses by both groups were in the area of play.

It was not the intent of this report to compare students' attitudes between full-day and half-day kindergarten but rather to determine whether or not the students who attended full-day kindergarten did have a positive attitude after completing second or third grade. The results of the Student Questionnaire for grades three and four indicate that the children did indeed have a positive attitude toward their full-day kindergarten experience. It should be noted that a similar questionnaire used with the control group might have

revealed the same attitudes toward a half-day kindergarten experience.

A total of 196 questionnaires were mailed to parents in the fall of 1982, and 92 of the parents or 47 percent returned them. Most of the parents indicated that their children learned more in the full-day kindergarten program; were better prepared for first grade; learned more self-control; became more socially adjusted; gained more self-confidence; became better listeners; were more able to express themselves verbally; were better able to follow directions; learned to enjoy music; had improved handwriting, cutting, and coloring skills; were better prepared for reading and mathematics; developed body coordination; and had better home-school relationships.

According to the 1980 study, almost all of the parents were pleased with the full-day program when their children finished kindergarten in 1979 or 1980. They continue to feel that way with only two percent of the parents surveyed now preferring half-day kindergarten to full-day kindergarten.

All 25 primary teachers in the four schools with full-day kindergartens completed the Teacher Opinionnaire. Nine of the teachers were from grade one, eight from grade two, and eight from grade three. The opinionnaire contained 16 statements about full-day kindergarten to which the teachers could agree, disagree, or be undecided.

In 12 of the 16 statements, a majority of the primary teachers indicated that full-day kindergarten was superior to half-day kindergarten. There was highest agreement with the statements that there was more time to develop basic listening and language skills, that students were not bored, and that students had been exposed to a more in-depth skills program. There was least agreement with the statements

that full-day kindergarten children socialize better with their peer group, that there were no apparent differences in the abilities of the children in the two groups, and that children in the full-day kindergarten program were more excited about coming to school.

The Piers-Harris Children's Self-Concept Scale was administered to children in both the experimental and control groups in the fall of 1982. The statistical t-test was performed to determine whether there was a significant difference between the full-day and half-day kindergarten scores.

The 1978-1979 full-day kindergarten children had higher self-concept scores than did the half-day kindergarten children with a mean score of 58.99 compared to a mean score of 54.81 for half-day kindergarten children. The full-day kindergarten children scored significantly higher with the statistical t-test showing $t = 1.98$ and $p < .05$. Therefore, the null hypothesis was rejected.

The 1979-1980 full-day kindergarten children had higher self-concept scores than did the half-day kindergarten children with a mean score of 60.48 compared to a mean score of 58.41 for half-day kindergarten children. However, the difference was not significantly higher with the statistical t-test showing $t = 1.08$, and the null hypothesis was not rejected.

During the fall of 1982 when the children were in the fourth grade, the Survey of School Attitudes, Intermediate Level, was given to the experimental and control groups who attended kindergarten in 1978-1979. The statistical t-test was performed to determine whether there was a significant difference between the full-day and half-day scores. The mean scores for the full-day kindergarten children were higher

than those of the half-day kindergarten children in all four subject areas, but they were significantly different only in science.

Also in the fall of 1982, the Survey of School Attitudes, Primary Level, was given to third grade students who had been in the experimental and control groups attending kindergarten in 1979-1980. The mean scores for the children who attended half-day kindergarten in 1979-1980 were higher than those of children who attended full-day kindergarten in all four subject areas, but they were significantly higher only in social studies.

The results from the Survey of School Attitudes suggested that there was no overall difference in school attitudes between the children who attended full-day kindergarten and those who attended half-day kindergarten, and the null hypothesis was not rejected. One full-day group scored higher than the half-day group in every subject area, and the other full-day group scored lower than the half-day group in every subject area.

The children received report cards four times each year in the primary grades. The marks that they received in subject achievement were S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement). At the end of each school year, report card grades were recorded on a composite report along with an average of these marks; these average marks were used to compare the groups.

The 1978-1979 and 1979-1980 experimental and control groups were compared in academic grades 23 times. The experimental groups consistently had a higher percentage of satisfactory marks and a lower percentage of less-than-satisfactory marks. The chi-square test of independence revealed that the grade assigned and membership

in the experimental and control groups were significantly associated in 11 of the 23 times that they were compared. Those subject areas in which the probability was less than .05 that the observed findings could be attributed to chance were mathematics, four times; reading, three times; spelling, two times; and English and handwriting, one time each. The null hypothesis was not rejected in the other 12 areas.

The conduct marks on report cards for the first, second, and third grades for the 1978-1979 experimental and control groups and the first and second grade report card conduct marks for the 1979-1980 experimental and control groups were presented in the report. Children received report card marks four times each year in 12 areas. The marks for these 12 areas were S (Satisfactory Progress), I (Improvement Shown), and N (Needs Improvement). At the end of each school year, report card conduct marks were recorded on a composite report along with an average of these marks, and these averages were used to compare the groups.

Children who attended full-day kindergarten received a higher percentage of satisfactory conduct marks 50 times out of a possible total of 60. The full-day kindergarten children received a higher percentage of less-than-satisfactory conduct marks 20 times out of a possible total of 120 times. There were five instances where the less-than-satisfactory conduct marks were the same for both groups.

The chi square test of independence was utilized five times for each of the 12 conduct areas. The test revealed that the conduct marks assigned and membership in the experimental and control groups were significantly associated 25 times in which the full-day kindergarten children received higher conduct marks and in one area (uses

self-control) in which the half-day kindergarten children received higher conduct marks. These areas for which membership in the full-day kindergarten group was significantly associated with more favorable conduct marks were as follows: obeys playground rules (5), shows self-confidence (4), respects property of others (4), uses time wisely (3), puts forth best effort (3), follows directions (2), works independently (2), works well with others (1), and listens attentively (1). Therefore, the null hypothesis was rejected in these 25 areas.

Children enrolled in kindergarten in the four experimental and four control schools in June 1979 and June 1980 were compared to grade levels to determine those promoted to a higher grade and those retained in the same grade for another year. The retention information referred only to those children who were still enrolled in the same school in June 1982 and did not involve children in the 1978-1979 or 1979-1980 kindergarten groups who had moved to other schools.

A higher percentage of children were retained from the groups of children who attended half-day kindergarten. Nineteen percent of the children who attended half-day kindergarten in 1978-1979 were retained at the end of kindergarten, grade one, grade two, or grade three; and only nine percent of the children who attended full-day kindergarten were retained. Seventeen percent of the children who attended half-day kindergarten in 1979-1980 were retained at the end of kindergarten, grade one, or grade two; and only four percent of the children who attended full-day kindergarten were retained.

The chi-square test of independence disclosed that the probability was less than one in 100 that the observed findings could have

occurred by chance and that the rate of retention and membership in the experimental and control groups were significantly associated. Therefore, the null hypothesis was rejected.

Handwriting tests were given in the fall of 1982 to the 1978-1979 and 1979-1980 experimental and control groups. The Evaluation Scale--Cursive for grade three was used with the 1979-1980 group, and the Evaluation Scale--Cursive for grade four was used with the 1978-1979 group. Each test included five areas: letter formation, slant, spacing, alignment and proportion, and line quality. The handwriting tests were rated 1, excellent; 2, good; 3, average; 4, fair; and 5, poor.

The children who attended half-day kindergarten in 1978-1979 and 1979-1980 had lower mean scores in the handwriting test. Because the rating of 1 was high and 5, low, a lower mean score indicated that the half-day kindergarten children performed better on the Evaluation Scale--Cursive than did the children who attended full-day kindergarten. The 1979-1980 control group scored significantly higher than the experimental group with a statistical t-test showing $t = 2.08$ and $p = < .005$.

The Gates-MacGinitie Reading Tests were administered to children in the spring of 1982 when the 1978-1979 groups were in the third grade and the 1979-1980 groups were in the second grade. The statistical t-test was performed to determine whether there was a significant difference between the full-day and half-day kindergarten group mean scores.

The results of the Gates-MacGinitie Reading Tests showed that the children who attended full-day kindergarten in 1978-1979 and 1979-1980 had higher mean scores in vocabulary and comprehension. For both

the 1978-1979 and 1979-1980 groups, the results of the t-test showed that the vocabulary and comprehension scores were significantly higher for the children who had attended full-day kindergarten. Thus, the null hypothesis was rejected.

The Comprehensive Tests of Basic Skills were administered to children in the 1978-1979 experimental and control groups in the spring of 1982. The statistical t-test was performed to determine whether there was a significant difference between means of the full-day and half-day kindergarten group scores.

The results of the Comprehensive Tests of Basic Skills showed that the children who attended full-day kindergarten in 1978-1979 had higher mean scores in all 14 areas of the test than the children who attended half-day kindergarten. The statistical t-test showed that the full-day kindergarten children were significantly higher in the following areas: word attack, vocabulary, comprehension, total reading, mechanics, total language, computation, conclusions and applications, total mathematics, and total battery. Therefore, the null hypothesis was rejected for these ten areas.

Conclusions

Children who attend full-day kindergarten, their parents, and their primary teachers have positive attitudes about the full-day kindergarten program. These children, when compared to children who attend half-day kindergarten, tend to have higher report card academic and conduct marks, a lower rate of being retained in a grade, lower handwriting ratings, and higher standardized test achievement scores. Their self-concepts and attitudes about school are not negatively affected by participation in the full-day kindergarten program.

Because the findings for this study are either two and three years or three and four years after the kindergarten experience, one may conclude that there are lasting effects for children who attend full-day kindergarten. As shown in the 1980 study, there were differences at the end of kindergarten and first grade between children who attended full-day and half-day kindergarten, and those differences in favor of the full-day kindergarten children continued into the third and fourth grades.

Recommendations

Based on the results of the study, the following recommendations concerning full-day kindergarten in the Evansville-Vanderburgh School Corporation are suggested:

1. The full-day kindergarten program should be maintained and gradually expanded when economically feasible to schools where community support exists and where appropriate space is available.

2. The full-day kindergarten staff should examine the results of the study to determine areas of the curriculum that might be changed or modified.

3. The longitudinal study should be expanded to 1987 and include results from the students' experiences in the middle and upper grades.

BIBLIOGRAPHY

A Study of the Effectiveness of Full-Day Kindergarten. Evansville: Evansville-Vanderburgh School Corporation, 1980, 106 pp.

Bailey, M. H., Durkin, D., Nurss, J. R., and Stammer, J. D. "Preparation of Kindergarten Teachers for Reading Instruction." The Reading Teacher, December 1982, pp. 307-311.

Boehm, Ann E. Boehm Tests of Basic Concepts. New York: The Psychological Corporation, 1970.

Burns, Paul C., and Broman, Betty L. The Language Arts in Childhood Education. Boston: Houghton-Mifflin Company, 1979.

California Achievement Tests. Monterey: CTB/McGraw-Hill, 1970.

Cleminshaw, H. K., and Guidubaldi, J. "The Effect of Time and Structure on Kindergarten Student Social and Academic Performance." The Journal of Educational Research, November/December 1979, pp. 92-101.

Comprehensive Tests of Basic Skills. Monterey: CTB/McGraw-Hill, 1981.

Erickson, J. "Kindergartens Far From Maturity." The Champaign-Urbana News-Gazette, October 17, 1982, p. A-2.

Evaluation Scale — Cursive, Grades 3 and 4. Columbus: Zaner-Bloser, 1979.

Hogan, Thomas P. Survey of School Attitudes, Manual for Administering and Interpreting. New York: Harcourt, Brace, Jovanovich, Inc., 1975.

Jersild, Arthur T. In Search of Self: An Exploration of the School in Promoting Self-Understanding. New York: Teachers College, Columbia University, Bureau of Publications, 1952.

MacGinitie, Walter H. Teacher's Manual for Gates-MacGinitie Reading Tests, Second Edition. Boston: Houghton-Mifflin Company, 1978.

McClinton, S. L., and Topping, C. "Extended-Day Kindergartens: Are the Effects Intangible?" Journal of Educational Research, September 1981, pp. 39-40.

Nieman, R. H., and Gastright, J. D. "The Long-Term Effects of Title I Preschool and All-Day Kindergarten." Phi Delta Kappan, November 1981, pp. 184-185.

Piers, Ellen V. Manual for the Piers-Harris Children's Self-Concept Scale. Nashville: Counselor Recordings and Tests, 1969.

"Play." Practical Application of Research, Newsletter of Phi Delta Kappa, December 1982, pp. 1-4.

APPENDIX

STUDENT QUESTIONNAIRE

Student _____
School _____
Tester _____
Date _____

	Yes	No
1. Did you feel more grown up when you got to go to school all day?		
2. If you went to school only half day, you would be able to spend more time with mother or your sitter. When you went to full-day kindergarten, did it bother you to be away from them?		
3. Half-day students do not get to eat in the cafeteria. Did you like eating in the school cafeteria when you went to full-day kindergarten?		
4. Half-day students are only able to spend a short time each day using the blocks, paints, and playhouse. Were you glad you went to school a full day so you could spend more time with these activities?		
5. Because you had more time to learn your letter names and sounds than those students in half-day kindergarten, do you think it was easier for you to learn how to read in the first grade?		
6. In full-day kindergarten, you were more often able to work on math activities. Due to this you were able to work on adding and subtracting. Did this help you in first grade?		
7. A student that goes to school half day gets to have art or music two or three times a week. When you were in full-day kindergarten you were able to have those subjects more often. Did you like this?		
8. Some children are frightened when they start first grade because they have not been away from home for a full day. Were you frightened when you went to the first grade?		
9. Are you glad you went to full-day kindergarten?		

10. What do you remember most about your year in kindergarten? _____

Comments: _____

_____

_____

PARENT QUESTIONNAIRE CONCERNING FULL-DAY KINDERGARTEN

	Yes	No	Undecided
1. As a result of the full-day kindergarten program, my child learned more than he would have in a half-day program.			
2. As a result of the full-day kindergarten program, my child was better prepared for first grade.			
3. As a result of the full-day kindergarten program, my child learned more self-control.			
4. As a result of the full-day kindergarten program, my child became more socially adjusted.			
5. As a result of the full-day kindergarten program, my child gained more self-confidence.			
6. As a result of the full-day kindergarten program, my child became a better listener.			
7. As a result of the full-day kindergarten program, my child was better able to express himself verbally.			
8. As a result of the full-day kindergarten program, my child was better able to follow directions.			
9. As a result of the full-day kindergarten program, my child learned to enjoy music.			
10. As a result of the full-day kindergarten program, my child's skills in handwriting, cutting, coloring were greatly improved.			
11. As a result of the full-day kindergarten program, my child was better prepared for reading.			
12. As a result of the full-day kindergarten program, my child was better prepared for mathematics.			
13. As a result of the full-day kindergarten program, my child developed body coordination.			
14. As a result of the full-day kindergarten program, better home-school relationships have developed.			

15. At the end of the year how did you feel about the full-day program?

_____I was pleased with the full-day program.

_____I was not pleased with the full-day program.

_____I was undecided about the full-day program.

16. How did you feel about full-day kindergarten when your child entered the full-day program?

_____I felt positive about the full-day program.

_____I felt negative about the full-day program.

_____I was undecided about the full-day program.

17. Which do you prefer?

_____Full-day kindergarten

_____Half-day kindergarten

Comments: _____

_____

_____

_____

FULL-DAY KINDERGARTEN OPINIONNAIRE — PRIMARY GRADE TEACHERS

I am presently teaching grade _____.

The following statements represent opinions, and your agreement or disagreement will be determined on the basis of your particular convictions. Please read carefully and mark your answer for each statement.

	Yes	No	Undecided
1. It would be beneficial to have all students enter my classroom having had a full-day kindergarten experience rather than a half-day kindergarten experience.			
2. The students who attended full-day kindergarten have better work habits than half-day kindergarten students.			
3. The students who attended full-day kindergarten function more independently than half-day kindergarten students.			
4. The children who have attended full-day kindergarten have a better mastery of skills than those who have attended half-day kindergarten.			
5. Students who attended full-day kindergarten are more excited about coming to school than half-day kindergarten students.			
6. Students who attended full-day kindergarten seem to be bored with school.			
7. Children who attended full-day kindergarten seem to socialize better within their peer group than half-day kindergarten students.			
8. There are no apparent differences in the abilities of children who attended full-day kindergarten versus half-day kindergarten.			
9. As a result of the full-day kindergarten, the students have been exposed to more in-depth basic skills programs.			
10. The children who attended full-day kindergarten have a better knowledge of phonics and reading skills than half-day kindergarten students.			
11. Fine motor skills and handwriting skills are further developed in the child who attended full-day kindergarten than the child who attended half-day kindergarten.			
12. Children who attended full-day kindergarten seem to have better gross motor coordination than children who attended half-day kindergarten.			

	Yes	No	Undecided
13. Students who attended full-day kindergarten can follow directions better than students who attended half-day kindergarten.			
14. The attention span of full-day kindergarten students is longer than the attention span of half-day kindergarten students.			
15. The full-day kindergarten program gives more time to develop basic listening and language skills.			
16. A full-day kindergarten experience seems better for five and six-year-olds than a half-day experience.			

COMMENTS: _____

_____

_____

_____

_____